

UNIVERSITY MICROFILMS
313 N FIRST ST
ANN ARBOR, MICH.

Subscription Price, \$6 Per Year

Vol. 77, No. 3, Serial No. 1,400

IONING
RATION
Industry

NEWS

January 16, 1956

ADVERTISER'S COPY

Issued every Monday at
450 West Fort St., Detroit 26, Michigan
Established 1926

Member,
Associated
Business
Publications

ABP

ABC

Member,
Audit
Bureau of
Circulations

Reentered as second class matter October 3, 1936 at the post office at Detroit, Mich., under the Act of March 3, 1879.

Trade Mark Registered U. S. Patent Office. Copyright 1956, by Business News Publishing Co.

Inside Dope

By GEORGE
F. TAUBENECK



Learn to live and laugh —
thus delay your epitaph

Stories of the Week
Gags of the Week
What's Doing In France
Did the Reds Have a
Word for It?
European Refrigeration
Is Picking Up
Incredible Travelogs
More Definitions

Stories of the Week

"Good news, parson. The Board of Deacons has decided to raise your salary."

"Goodness me. We must stop them before they go too far. I'm having trouble raising what they're paying me now."

Rambunctious pre-school boy couldn't sit still in a scheduled airliner. Ran up and down the aisle disturbing passengers and upsetting food trays.

"Sonny," exasperated the hostess while trying to clean up the messes, "why don't you run outside to play?"

Ty Execoon was noted and feared for his staff memos.

An assistant, discovering belatedly that he'd sent Ty a wrong set of figures, hastily wrote a memorandum of his own, beginning:

"In answer to your memo of tomorrow. . . ."

Gags of the Week

There is nothing teenagers enjoy more than being left alone while their parents are attending juvenile delinquency meetings—DAN KIDNEY.

The golden age of parenthood is when the children are too old for babysitters but too young to drive the car.—ED MACK.

What's Doing In France

Thanks to good friend Anthony de Lorenzo, who accompanied G-M President Harlow Curtice on the latter's 1955 tour-of-Europe, we learn that:

France's principal output (in our industry) is household refrigerators, starting from a 4.3-cu. ft. table-top model and a 4.4-cu. ft. upright cabinet, and ranging upward in capacity to a 9.7 cu. ft. model. Most popular model is that of 6-cu. ft. capacity. A 7½-cu. ft. model is available in three versions, ranging from an economy model to an imperial refrigerator.

Commercial refrigerator cabinets of 19 and 27-cu. ft. capacity also are produced, as is a line of five models of ice cream freezing and storage cabinets. Air and water-cooled commercial
(Concluded on Page 10, Col. 1)

'What Is the Industry?' Main Question at FTC Rules Hearing

DETROIT—The first of two final hearings on proposed trade practice rules for the refrigeration and air conditioning contracting industry was held at the Sheraton-Cadillac hotel here on Jan. 6 by the Federal Trade Commission.

As was the case at the opening conference on the subject in Chicago last May, practically all of the discussion concerned not the suggested rules themselves but "the industry defined."

This was the first point which was taken up following opening remarks at the hearing by FTC Commissioner Robert T. Secrest.

When Paul Butz of the FTC staff asked if there were any comments on the industry definition, John Demling, an attorney representing the Sheet Metal Contractors National Association, Inc., presented a statement

in which the association maintained that the tentative rules "seek to combine two distinct industries, i.e., the refrigeration contracting industry and the air conditioning contracting industry."

The Sheet Metal Contractors Association representative declared that there should be a separate set of rules for each industry, and it submitted proposed changes in the tentative rules to this end. The group said it will file a brief with the FTC outlining its position in detail prior to Jan. 20. On that date, the final hearing will be held in the Federal Trade Commission building, Washington, D. C.

The subject was debated pro and con by some of the others present. The discussion got into such things as the definition of
(Concluded on Page 2, Col. 1)

400 Firms To Exhibit at Plant Maintenance & Engineering Show Jan. 23

PHILADELPHIA—More than 400 companies will exhibit some 5,000 different products and services at the four-day Plant Maintenance & Engineering Show which opens Jan. 23 at Convention Hall here.

The show will be accompanied by a three-day conference at which 26 aspects of factory upkeep will be discussed. Clapp & Poliak, Inc., New York exposi-
(Concluded on Page 11, Col. 4)

Baltimore Aircoil Ups Kahlert to Head Sales

BALTIMORE—Baltimore Aircoil Co. recently announced the appointment of W. E. Kahlert as vice president in charge of sales.

Kahlert has been with BAC for approximately one year and will direct the company's sales and advertising program. He is a graduate of the University of Minnesota and was
(Concluded on Page 33, Col. 5)

Kain Named Koch Vice President

KANSAS CITY, Kan. — Millard Mayer, chairman of the board of Koch Refrigerators, Inc., announces the appointment of Harold Kain as vice president in charge of sales.

Kain has been sales manager for Koch since 1953.

Kain has a
(Concluded on Page 4, Col. 1)

Servel To Market '57 Refrigerator Models In Spring

EVANSVILLE, Ind.—"Color-balanced" interiors and the exclusive "automatic ice-server" will highlight the 1957 refrigerator line of Servel, Inc., which will reach retail markets this spring, the company has announced.

Servel also disclosed that its five-model 1956 room air conditioner line features greater cooling efficiency, adjustable mountings, and pushbutton controls.

New Servel appliance models are being unveiled to utility
(Concluded on Page 33, Col. 1)

Warranty Expense Tax Decision Hit

WASHINGTON, D. C.—Retroactive reversal of a court ruling which would give a substantial tax cut to firms that have expenses under sales warranties is one of about 40 technical changes in excise tax laws and regulations recommended to Congress by Treasury and Congressional tax staffs.

Dan Throop Smith, assistant
(Concluded on Back Page, Col. 2)

Welbilt Room Units Feature 'Quiet-Guard'

MASPEETH, L. I., N. Y.—An exclusive new device for room air conditioning units called "Quiet-Guard" will be featured in the 1956 Welbilt Corp. air conditioning line, the company has announced.

Use of the Quiet-Guard, when the unit is in operation, "makes possible quieter cooling, better cool air circulation in the room, and dryer cooling," the company claims.

(Concluded on Page 35, Col. 4)

Air Conditioners Prominent at Record-Setting Chicago Mart

ASHAE To Meet In Cincinnati Jan. 23 to 25

CINCINNATI—Sixteen papers covering a variety of topics will be presented at eight technical sessions which have been programmed for the 62nd annual meeting of the American Society of Heating and Air-Conditioning Engineers to be held Jan. 23 to 25 at the Sheraton-Gibson hotel here.

Included in the sessions will be two symposiums: one on high velocity air distribution, the other on air pollution.

A single technical session is scheduled for Monday morning, Jan. 23, two sessions each on Monday afternoon and Tuesday morning, one session Wednesday morning, and two (the symposiums) Wednesday afternoon.

Various committee meetings are planned for Saturday and
(Concluded on Page 4, Col. 4)

702 Levittown Homes Will Be Equipped With Central Cooling

NEW YORK CITY—What is said to be the largest contract ever awarded for residential air conditioning was jointly announced here by the community building firm of Levitt & Sons, Inc., and Carrier Corp.

The agreement provides for the installation of "Weather-maker" central air conditioning systems in 702 "Country Club" homes to be built in Levittown, Pa. Signing the contract were William J. Levitt, president of the Levitt firm, and Cloud Wampler, chairman and president of Carrier.

The homes, complete with air conditioning, carry a price tag of \$18,990.

Wampler described the con-
(Concluded on Back Page, Col. 1)

CHICAGO — Record-breaking attendance, an obvious feeling of optimism, and the emergence of air conditioning as an important "hard goods item" in American merchandising circles made the news on the opening days of the annual Winter Homefurnishings Markets here. The mart period opened Jan. 9 and continues to Jan. 20.

In the "white goods" lines more manufacturers were showing more "built-in" refrigerator and freezer models of their own

Pictures of some of the new products and merchandising displays shown at the Chicago Mart will be published in future issues of the NEWS.

manufacture. Some operating models of electronic ovens were shown. Color appliances and "color" treatment methods for white appliances were also prominent.

The recognition of air conditioners as a product to be reckoned with was to be noted in the prominence given to the display of air conditioning products in the various market spaces. Frigidaire, Westinghouse, and others have developed new
(Concluded on Page 33, Col. 3)

Emerson Presents 1956 'Germ-Killer' Room Conditioner

NEW YORK CITY — An "Electronic Germ-Killer" air conditioner, which in addition to the usual cooling and ventilating functions of an air conditioner, "rapidly reduces airborne bacteria in a room to insignificant numbers," was presented recently by Benjamin Abrams, president of Emerson Radio & Phonograph Corp.

The exclusive unit highlights the company's extensive 1956 line of room air conditioners, which includes four new 7½-
(Concluded on Page 13, Col. 1)

Market Air Conditioning	
Manufacturer Advises Commercial Distributors How To Get Most Profit from Packaged Units.....	6
Sales Meetings	
How To Make Them Worthwhile.....	8
Accounting System	
Commercial Distributor Offers Some Pointers....	22
Residential Air Conditioning	
Water Shortage Aids Trend To Use of Air-Cooled Systems.....	26
Detroit Commercial Sales	
Analysis of Permits Gives Number of Installations and Where Installed.....	28
Air Conditioning Govt. Bldgs.	
Text of New Standards for Determining Need for Cooling in New Structures.....	
Servicing Auto Air Conditioners	35

Trade Practice Rules Hearings--

(Concluded from Page 1)
air conditioning, the definition of a contractor, union jurisdictional strife in the field, and even what segment of the business started air conditioning.

Secrest commented more than once that regardless of whether refrigeration and air conditioning is one or two industries, those affected are required to observe existing laws and rules merely restate such laws. He also observed that if two sets of rules were established, they would be "just about the same."

At one point, Butz suggested that use of the phrase "refrigeration and/or air conditioning contracting industry" might be a satisfactory solution.

Kromer Cites Natural Ties Between 2 Fields

Toward the close of the hear-

ing, Ray Kromer, executive vice president of the Refrigeration & Air Conditioning Contractors Association, disputed certain statements made, asserting that they showed misunderstanding or ignorance of the industry.

Among other things, Kromer said that old-line refrigeration manufacturers were the ones who naturally expanded into air conditioning and that refrigeration contractors representing them expanded with them, so that air conditioning and refrigeration are naturally tied together.

"It is respectfully requested," the Sheet Metal Association statement said, "that the Federal Trade Commission take cognizance of the fact that the refrigeration contracting industry and the air conditioning contracting industry are two sepa-

rate industries.

"This recognition is given by the present separation of the two industries in the proposed rules. However, the fact that two industries are being covered in one set of rules creates confusion.

"The Federal Trade Commission can eliminate this confusion by publishing a set of trade practice rules for each industry."

Sheet Metal Group Asks Two Sets of Rules

The association said that approval of its proposed "changes" in the rules "will render the present undertaking of the Federal Trade Commission unobjectionable to the Sheet Metal Contractors National Association." It asks that two sets of rules be approved as follows:

"Trade Practice Rules for the Refrigeration Contracting Industry. The Industry Defined.

"The industry for which these

trade practice rules are established in this proceeding consists of persons, firms, corporations, and organizations engaged in the sale and installation of Mechanical Refrigeration Units or Systems for commercial or industrial use.

"(Note: As above used the word 'installation' makes reference to the performance of services requiring engineering knowledge and skill, and the term 'Mechanical Refrigeration Units or Systems' makes reference to units or systems which are capable of the reduction of temperature of a substance or space for commercial or industrial purposes.)

"Rules 1 through 15, EXCEPT RULE 7, of the proposed rules are acceptable as constituted.

"Rule 7 should read as follows: . . . It is an unfair trade practice for any industry member, in the course of or in connection with the sale and instal-

lation of industry products, to represent, directly or indirectly, that he is a refrigeration contractor, when such is not the fact; or in any other manner to misrepresent the character, extent or type of his business."

Proposed Definition

The association proposed that under rules for the air conditioning contracting industry, the industry be defined as follows:

"The industry for which these trade practice rules are established in this proceeding consists of persons, firms, corporations, and organizations engaged in the sale and installation of Mechanical Air Conditioning Units or Systems for commercial, industrial, or home use.

"(Note: As above used, the word 'installation' makes reference to the performance of services requiring engineering knowledge and skill, and the term 'Mechanical Air Conditioning Units or Systems' makes reference to units or systems which are capable of the simultaneous control of temperature, moisture content, movement, and quality of the air in enclosed spaces intended for human occupancy."

Again, rules 1 through 15, except rule 7, of the proposed rules are acceptable, the association said. It asked that in rule 7, the present words "air conditioning or refrigeration contractor" be changed to "air conditioning contractor."

Elaborating on the association's views, Demling said the proposed rules for the refrigeration and air conditioning contracting industry imply that the all-around contractor is the refrigeration and air conditioning contractor. He stated that an individual can be a refrigeration contractor without being an air conditioning contractor and vice versa.

Demling asserted that there is no justification for the "forced marriage" of the refrigeration and air conditioning "industries." If the proposed rules are adopted as now stated, his association may ask that rules be established for the "warm air heating and air conditioning industry," he added.

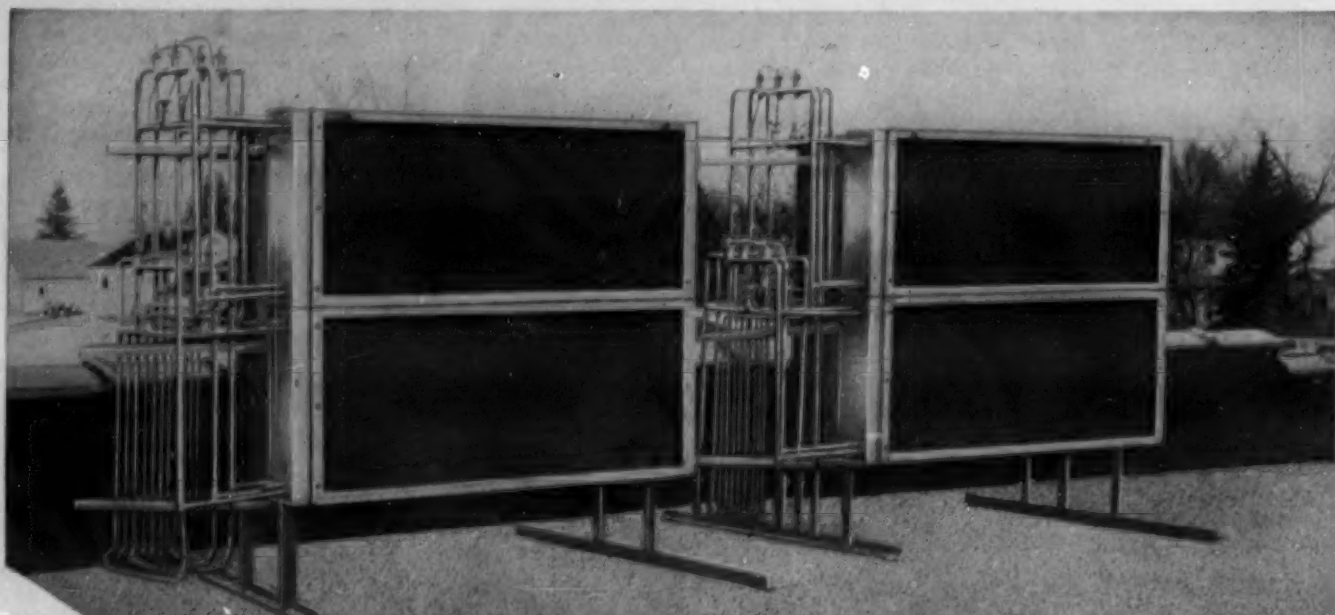
Rules Are Restatement Of Existing Laws

In his opening remarks, Secrest pointed out that trade practice rules are merely restatements of existing laws. He said the rules are intended to be educational in nature so those concerned will know what the laws are.

He explained that if a violation is charged, the FTC brings a case under the section of the law involved, not under a trade practice rule.

Secrest also noted that "signing" of trade practice rules is purely voluntary. Butz explained after the hearing that an "acceptance card" is sent out with each copy of the final promulgated rules and that although signing of the card is voluntary, failure to do so does not relieve anyone from observing the law.

He added that more than 7,000 notices of the final hearings were sent out to those concerned. He said that after the hearing in Washington on Jan. 20, the FTC will study the testimony presented at the final hearings or by other means before proceeding to final action.



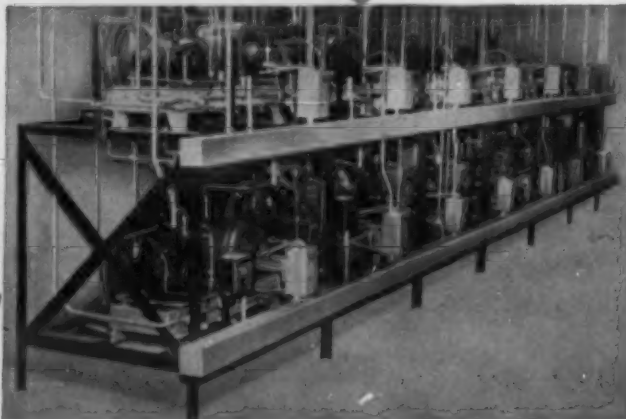
KRAMER

UNICON FOR SUPERMARKETS

**Serves 14 Compressors
Winter and Summer
WITHOUT ANY WATER***

Photographs of
UNICON installation
at Trimborn's Supermarket,
Hales Corner, Wisconsin

Installed by
Real Refrigeration
Sales and Service,
Milwaukee, Wisconsin
Units furnished by
Wisconsin Refrigeration
Supply Company,
Milwaukee, Wisconsin



WRITE FOR BULLETIN U-291

*UNICON is a Remote-Type Air-Cooled Condenser

KRAMER TRENTON CO. • Trenton 5, N.J.

Announcing LEWYT BUILT-IN WALL AIR CONDITIONER FOR CONTRACTORS!

NOW, you can sell built-in air conditioning for one room, two rooms, or every room in the house!

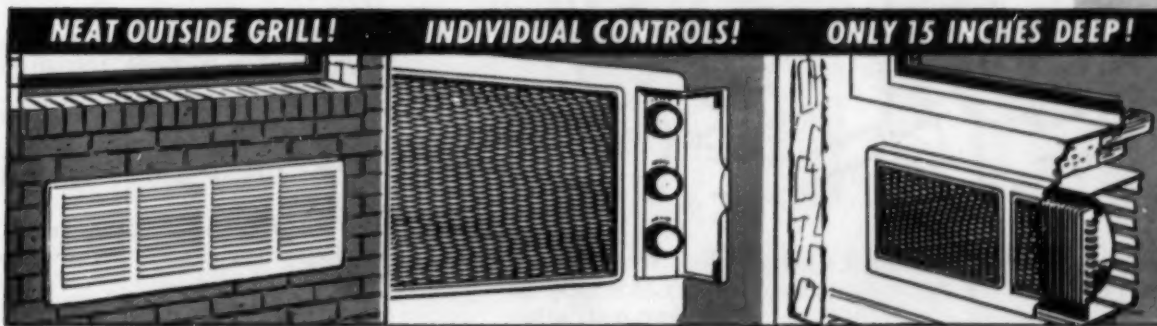
NOW, you can share in the profits of two great markets:

1. The NEW HOME MARKET!
2. The HOME REMODELING MARKET!

Lewyt opens a great new profit opportunity for Air Conditioning, Plumbing, Heating, Electrical and Remodeling Contractors! The amazing Lewyt is a totally new idea—lets you sell built-in wall air conditioning for less than the cost of window units! Installs easily in frame, brick, stucco and cement walls! Can be used in homes, residential projects, commercial and industrial developments! Mail coupon, today, for details of a Lewyt Built-In Wall Air Conditioner Dealership!



F. H. A. MORTGAGES AVAILABLE



Lewyt doesn't jut out, nothing mars the exterior beauty of your customer's home!

Each Lewyt is a self-contained unit with built-in controls and thermostat!

Fits flush—anywhere in any outside wall!

NO DUCTS! NO PLUMBING! NO OVERHANG!
Doesn't block windows or cut off light! Installs under, over or next to windows, as well as near ceiling or floor!

ONLY LEWYT includes all these BIG "EXTRAS!"

- **COMPACT**—only 15" deep, 14 1/8" high, 32 1/8" wide!
- **COMPLETE**—each unit has built-in controls and thermostat!
- **FLEXIBLE**—can be installed in one or all rooms!
- **POWERFUL**—2-speed motor available in 1/2, 3/4 and 1 H.P.!
- **FUNCTIONAL**—super cools, dehumidifies, filters and exhausts stale air!
- **HEATS**—reverse-cycle pump for heating—optional!
- **GUARANTEED**—5-year warranty! UL Approved!

WRITE TODAY!

Contact your nearest Lewyt Air Conditioner Distributor. If one has not as yet been appointed in your area . . . mail coupon to:

LEWYT GIVES CONTRACTORS A COMPLETE "TRAFFIC-BUILDING, PROFIT-BUILDING" MERCHANDISING PROGRAM!

- Magazine Ads • Newspaper Ads • Direct Mail Campaigns • Showroom Displays • Builder Displays • Participation in local and national Home Shows

SEE LEWYT AT THE NAHB SHOW • CHICAGO, JAN. 22 THROUGH JAN. 26 • BOOTH 854

LEWYT BUILT-IN WALL AIR CONDITIONER

By the maker of the famous Lewyt Vacuum Cleaner

LEWYT AIR CONDITIONER CORP.
DEPT. AC-1
57th St. and 1st Ave., Brooklyn 20, N. Y.

Gentlemen: Without any obligation on my part, please send all details as to how I may qualify for a Lewyt Air Conditioner Dealer Franchise.

NAME _____
TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

For more information about products advertised on this page use Information Center, page 24.

NWAHACA To Feature Year-Round Air Conditioning In 20 Indoor Comfort Conferences Starting Jan. 9

CLEVELAND—A new series of 20 Indoor Comfort Conferences sponsored by the National Warm Air Heating and Air Conditioning Association will get under way on Monday, Jan. 9, the association announced recently.

This year, the two-day conferences will feature year-round air conditioning applications. Students will learn by working with practical problems in heat gain calculations and duct sizing to accommodate both heating and cooling.

Attention will also be given to balancing the system for the change-over from the heating to the cooling season.

Guy A. Voorhees, NWAHACA technical secretary, will again instruct the conferences as he

has for the past eight seasons.

Series schedule is as follows: Jan. 9-10, South Bend, Ind.; Jan. 23-24, Chicago; Jan. 26-27, Fond du Lac, Wis.; Feb. 6-7, Birmingham, Ala.; Feb. 9-10, Atlanta; Feb. 13-14, Charlotte, N. C.; Feb. 27-28, Louisville, Ky.; March 1-2, Cincinnati; March 5-6, Columbus, Ohio; March 8-9, Pittsburgh; March 12-13, Lewisburg, Pa.; March 15-16, Newark, N. J.; March 26-27, Cleveland; March 29-30, Buffalo; April 2-3, Albany, N. Y.; April 5-6, New Haven, Conn.; April 9-10, Indianapolis; April 18-19, Minneapolis; April 23-24, Denver; and April 26-27, Salt Lake City.

Registration is \$20 per person paid in advance to the local chairman for each conference.

ASHAE To Meet--

(Concluded from Page 1, Col. 4)

Sunday before the convention and on Tuesday afternoon, which has also been left open for inspection trips.

A number of entertainment features are on the program. At the welcome luncheon Monday members will hear F. W. Giesel, business manager, Cincinnati Post. A tea and reception is planned for Sunday afternoon, and Monday night the group will move across the Ohio river for a "Fun In Kentucky" party at the Beverly Hills country club.

The convention will close with the annual banquet Wednesday.

At business sessions of the society there will be discussion and action on several proposed amendments to the by-laws, including some revision of membership grades and a regional plan for chapter operations.

General chairman of the Cincinnati chapter committee on arrangements is Arthur W. Edwards. Harold E. Russell is vice chairman, and Howard E. Sproull, honorary chairman.

Arthur J. Hess is chairman of the ASHAE program and papers committee.

MONDAY, JAN. 23

10 a.m.—First session (Ballroom).

President's report, John E. Haines.

Council report, A. V. Hutchinson.

Treasurer's report, E. R. Queer.

Committee on Research report, B. H. Jennings.

"Noise Production and Damping in Water Piping," W. L. Rogers.

12:15 p.m.—Welcome luncheon (Roof).

2 p.m.—Second session (Ballroom).

"Performance of Covered Hot

Water Floor Panels, Part I, Thermal Characteristics," E. L. Sartain and W. S. Harris.

"Thermal Design of Warm Water Ceiling Panels," L. F. Schutrum, C. M. Humphreys, and G. V. Parmelee.

"Heat Gain Through Glass Skylight Fenestrations," D. J. Vild and G. V. Parmelee.

2:30 p.m.—Third session (Roof).

"Moisture in Transient Heat Flow," K. R. Solvason.

"Characteristics of Downward Jets from a Vertical Discharge Unit Heater," S. M. Yen, Linn Helander, and L. B. Knee.

"Resistance of Rectangular Divided-Flow Fittings," L. G. Miller, C. H. Pesterfield, and R. J. Waalkes.

6:45 p.m.—Kentucky party.

TUESDAY, JAN. 24

9:30 a.m.—Fourth session (Ballroom).

Amendments to by-laws.

Report inspectors of election.

"Evaluation of Equipment Noise," H. C. Hardy and D. E. Bishop.

"Electric Analog Studies of Single Wall Sections," Harry Buchberg.

"Electric Analog Analysis of a Cooled Structure Complex," C. F. Kavan.

10 a.m.—Fifth session (Roof).

"Index for Evaluating Heat Stress in Terms of Resulting Physiological Strains," H. S. Belding and T. F. Hatch.

"Body Evaporation During Short Exposures to Various Temperatures, Humidities, Pressures, and Mass Velocities," J. W. McCutchan.

"Humidity Effects on the Odor Problem," R. L. Kuehner.

WEDNESDAY, JAN. 25

9:30 a.m.—Sixth session (Ballroom).

"Elements of Dual Duct Design and Performance," N. S. Shataloff.

"Branch Fitting Performance at High Velocity," C. M. Ashley, S. F. Gilman, and R. A. Church.

"Self-Actuated Room Control from High Speed Air," E. F. Snyder, Jr.

2 p.m.—Seventh session (Ballroom).

High Velocity Air Distribution symposium.

"Duct Design," M. W. Wilson.

"Economics, Costs vs. Velocity," John Everetts, Jr.

"Fan and Air Noises," C. W. Lemmerman.

"Duct Construction," K. A. J. Monier.

"Field Testing," R. D. Tutt.

Report of committee on resolutions.

Unfinished and new business.

2 p.m.—Eighth session (Roof).

Air Pollution symposium.

"Health Aspects," Arthur Stern.

"Smog," Gordon Larsen.

"Regulations," Harry Ballman.

"Cleaning," J. W. May.

"Practical Approach," Charles Gruber.

"Enforcement," J. H. Carter.

6:30 p.m.—Social hour.

7 p.m.—Annual banquet.

Sampson Holds Open House

CHICAGO—The Sampson Co., distributor in the Chicago market for Vornado air circulators and air conditioning systems, recently held a two-day open house for its appliance dealers to show the 1956 Vornado line.

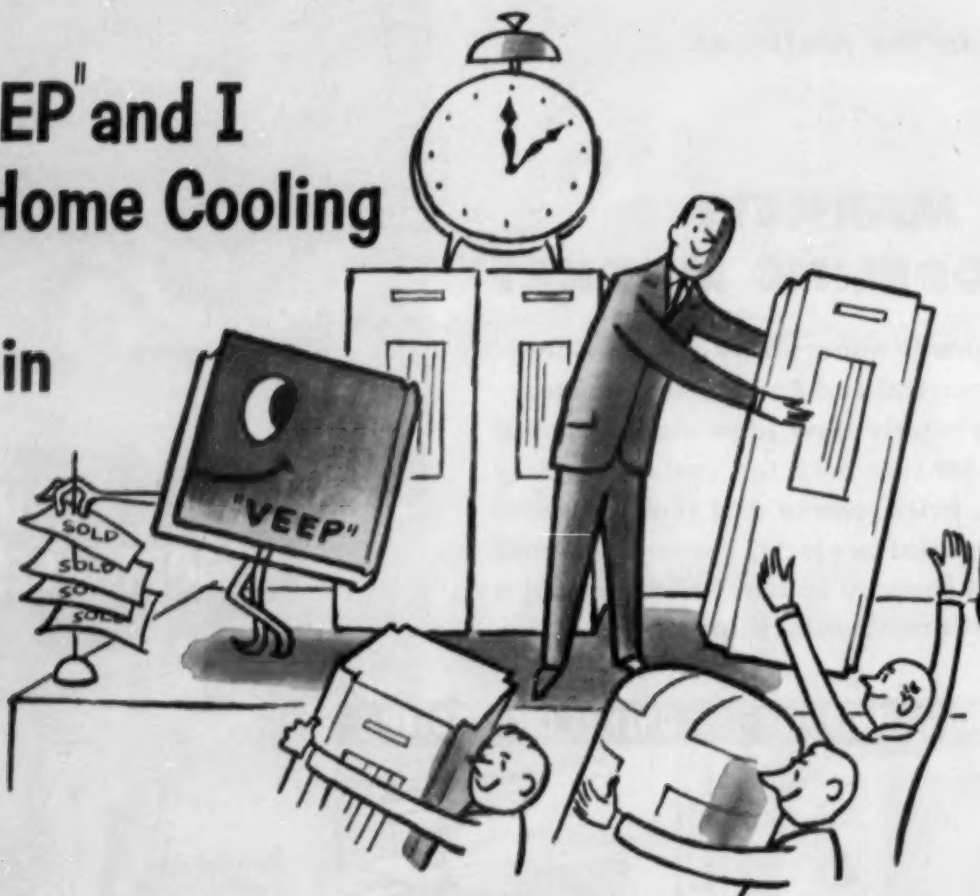
Report #1

THE G-E "VEEP" IN ACTION

How new G-E "Magic Sales-Maker" popularly called "The Veep" helps increase sales for G-E Home Heating and Cooling Dealers



How the "VEEP" and I sold 7 G-E Home Cooling units and 4 furnaces in 24 hours!



JOHNNIE AIMONETTE,
L & L Sales, Inc.,
General Electric Dealer
Springfield, Ill.

SOLD! Seven G-E home cooling units and four G-E furnaces between the hours of 5 PM Friday and 5 PM Saturday! Looks pretty much like an all-time record!

Well, that's the score made by Johnnie Aimonette of L & L Sales, Inc., Springfield, Ill. Or rather, as Johnnie puts it, "The 'Veep' and I did it!"

This was the highlight of an amazing 5-month record that

Johnnie achieved with the aid of the "Veep." A record of 58 sales of cooling units and 47 heating units between March 1 and July 31, 1955! His leads came from 3 sources—direct mail—advertising (newspaper and radio spots) and assistance from Mrs. "A." But when it came to clinching sales, Johnnie needed only one source of assistance, the "Veep."

"The new 'Veep' definitely helped close these sales," reports Johnnie. "Fact that the story is told mostly in pictures makes it easy to elaborate on my own sales pitch, and still cover all the important, sales-making features."

Watch for more true sales stories like this one—in future G-E advertisements in this publication. They all teach the same lesson—the profit-wise home heating and cooling dealer is the one who has climbed on the G-E Bandwagon. Want to join up?



FREE! Sales Secrets That You Can Use.

Exciting success stories by G-E salesmen tell how they broke sales records with the aid of the "Veep." For your copy write GENERAL ELECTRIC, HOME HEATING AND COOLING DEPT. AC-516, BLOOMFIELD, N. J.

Progress Is Our Most Important Product

GENERAL ELECTRIC

Home Heating and Cooling Dept., Bloomfield, N. J.

For more information about products advertised on this page use Information Center, page 24.

Cobell Division Names Wright

FORT WORTH, Texas—W. F. (Frank) Wright, Jr. has been named national sales manager of the Gas Air Conditioning Div. of Cobell Industries, Inc. here.

The announcement was made by Cobell President Luther D. Prescott, who said introduction of the Cobaire gas air conditioner on the consumer level for the 1956 season is assured.

Carrier Detroit Post Goes To Chapman

SYRACUSE, N. Y.—Richard K. Chapman has been appointed branch manager of the Detroit office for the Unitary Equipment Div. of Carrier Corp., it was announced here by John M. Bickel, division vice president.

Chapman's office will be located in the Standard Savings building, 409 Griswold St., Detroit.

Hotel Completes Air Conditioning

HOLLYWOOD, Fla.—Having air conditioned all its 500 rooms, the Hollywood Beach hotel will remain open 10 months a year, it was reported recently.

In addition to this main improvement in its \$1,000,000 renovation program, the hotel enlarged its convention room to 2,500 seats and will remain open into June each year.

60% of Home Buyers Get Conditioning from Bldr.

NEW YORK CITY—Optional air conditioning has been taken by 60% of the buyers of a new \$9,000 two-bedroom houses being built by Pampa, Texas builder Richard Hughes, it was recently reported.

Hughes, former president of the National Association of Home Builders, has now extended his operations.



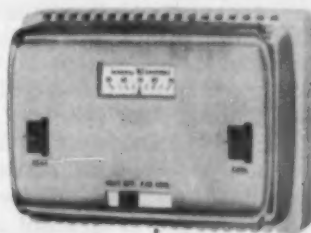
IN RECOGNITION of the Discarded Refrigerator-Freezer Campaign to eliminate needless deaths of children, H. W. Schaefer, Philco vice president representing the Household Refrigerator and Freezer Section of NEMA receives the George Schuld Memorial Award plaque from R. D. Hollingsworth, chairman of International Safety Committee, RSES.

any heating and cooling control system is all right when it's all General Controls

The best heating and cooling job is better automatically—with one source and one responsibility for the entire control system

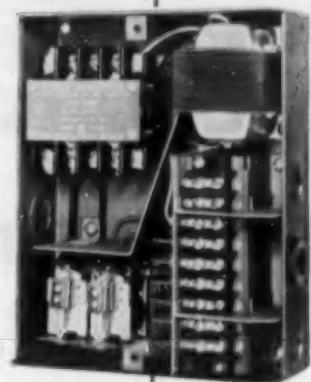
Sometimes the whole is greater than the sum of its parts. For example, when a heating and cooling control system is General Controls from first to last, you have the advantage of top quality in each part. And the added advantage of having each control component custom-engineered to work best with every other component. All this plus the incalculable advantage of knowing there is a single responsibility for perfect performance.

A single source simplifies the manufacturer's design and procurement problems, solves the jobber's stocking problems, provides the dealer with sales-building consumer acceptance for his products. The result: a better end product, easier to sell.



T-231

Combination Heating and Air Conditioning Thermostat provides single point temperature control.



RS108A241

Master Control Panel provides prewired installation for any combination of motor controls. Underwriters' Laboratories Approved.



Centralizes control of complete year 'round functions—heating, cooling, or blower alone for ventilation.

A complete product line with **ONE SOURCE OF SUPPLY, ONE RESPONSIBILITY**



L-34



MR-5

HEATING SYSTEM



V-300



K-3A



SY-6



V-205M

COOLING SYSTEM



K-255



L-49

General Controls
Automatic
HEATING AND
AIR
CONDITIONING
CONTROLS

Five Plants:
Iron Mountain, Michigan
Glendale, California
Warren, California
Skokie, Illinois
Guelph, Canada



GENERAL CONTROLS

Manufacturers of Automatic Controls for Home, Industry, and the Military

FORTY BRANCH OFFICES SERVING THE UNITED STATES AND CANADA

PERFEX CONTROLS AND GENERAL CONTROLS

Market Air Conditioning

**Right Equipment, Air Conditioning Study, Layouts, Promotion
All Lead to Greater Sales and Profits for Packaged Dealers**

ATLANTIC CITY, N. J.—“As compared to drugstores, restaurants, and apparel store outlets, the terrific potential existing for the sale of packaged air conditioning in food stores is greater than in any other retail outlet,” believes Don V. Petrone, president, Typhoon Air Conditioning Co.

Air Conditioning Offers Many Things

“Air conditioning is as much a part of the modern food store as the meat grinder, price tags, or modern refrigeration,” he told the National Commercial Refrigerator Sales Association at its ninth annual convention. Approximately half of the distributor members of NCRSA are already in the air conditioning business, Petrone said.

“Air conditioning offers you NCRSA distributors the opportunity to sell a complete job, increase your sales, increase your profits, and therefore keep your operation in the black.

“In order for you men to achieve the profit and volume that is rightfully yours in the sale of packaged air conditioning to food stores, it is recommended that you keep the following points in mind:

“1. With the right kind of air conditioning equipment, a college graduate engineer is not an absolute necessity on your staff. By the right kind of equipment I mean a range of equipment that will invariably have the size and style of unit to fit every job, instead of trying to design the supermarket to fit the equipment available.

“Since food markets run anywhere from 7½ to 40-50 tons, the equipment you handle should have this range of sizes available. Using self-contained units instead of the remote central station will keep your field installation problems to a minimum and enable you to show your estimated profit become an actual profit after the installation is completed.

Study Air Conditioning

“2. It is recommended that you set aside some time—not a great deal of time—to get acquainted with air conditioning and to study it as faithfully as you have modern food merchandising methods, although it is granted that there will not be as great a demand on your time to acquaint yourselves fully with air conditioning and the equipment you handle as it takes to keep abreast of the commercial refrigeration food store business,” Petrone said.

“3. Include air conditioning layouts in every store plan prepared by you. Include the selling price of the air conditioning system in the bid on a complete store.

“4. Promote your air conditioning sales through your house organs, catalogs, direct mail, and in your personal calls.

“5. Promote the sale of air conditioning through the voluntary chain groups and independent chains just as you do store equipment.

“At this point let me mention

that our experience has shown that a distributor who does a good job in food stores, which is your normal field of business, will get the biggest share of the air conditioning business in his trading area,” Petrone declared.

“Most manufacturers in our business have concise engineering manuals with simple charts to follow which make your job of calculating the tonnage required and selecting the equipment a simple procedure.

“With self-contained units, most of the engineering has been done at the factory. Some manufacturers actually offer you engineering assistance.

“Now, to you men who are in the air conditioning business,

the key is ‘more sales and profits,’ as the two must go together if any business is to be a continuing success.

“Over the years, I can remember many ingenious plans originated to build sales; one in which a dealer in New Orleans direct-mailed every commercial establishment in his city, offering a 5-ton unit installed for less than \$1,250; another in Baltimore where a dealer advertised in the newspaper that he needed 50 users to establish his product and would install the first 50 air conditioning jobs at his actual cost.

“Unfortunately, these dealers are not around any more, so I can’t tell you whether or not

their ideas accomplished their mission. I can tell you, however, without fear of contradiction, that any plan for boosting sales that does not include a sound profit on each and every sale is like a straight line—it’s the shortest distance between you and the hands of receivership,” cautioned Petrone.

“We are all entitled to a fair profit as the reward for making a sale. That is the underlying principle of free enterprise that has made our country great. Why then is it so difficult for a reputable distributor to increase sales and, along with it, increase his gross profits?

“Let us take a minute to review some past history to see if we can shed some light on the subject. The typical commercial refrigeration dealer in late 1945, after the prolonged shortage of merchandise due to war restrictions, set out to obtain product and franchise so he could get back into the sell-

ing business. In the ensuing two years we went from a sellers’ market to a buyers’ market, and during this transition, the commercial refrigeration dealer found the start of price competition and cut-rate selling.

“At this point, however, your defense was to include ‘store planning’ and ‘store engineering’ into your sales picture. This raised your overhead somewhat to add a draftsman to your team, but it did eliminate some of the cut-rate competition. For a time this seemed to be the answer because you were selling the prospective customer an intangible which could not be measured exactly in dollars and cents, and thus it gave you an opportunity to sell and make a profit.

“The rapid and tremendous growth in the food store field followed, and, of course, is still in the expansion period. In the ensuing scramble for this big

(Concluded on next page)

Greatest advance in Worthington's exclusive new FLEXI-COOL easy-to-handle sections...

That's the story in a nutshell! The FLEXI-COOL line—unique in design and completely flexible, goes together like building blocks—covers installations that ordinarily would require many different types of equipment.

Worthington's new FLEXI-COOL—in 2, 3, 5, 7½ hp sizes—permits you to stock a minimum of equipment yet solve any home, office or store air conditioning installation. Not only does FLEXI-COOL reduce the size of your inventory (and simplify your stocking problems) but it also automatically cuts your inventory costs.

The new FLEXI-COOL line consists of three basic sections—cooling cycle, filter and blower—plus accessory packages. A combination of these three basic sections (or a remote duct coil, and water or air-cooled condensing unit when needed) permits you to solve any type of installation. Sections fit together as a single compact unit... or can be installed separately in any location. With a choice of vertical or horizontal positioning, you can easily obtain the air intake and delivery best suited to the installation. That's how flexible the FLEXI-COOL line is.

Once installed, you can count on FLEXI-COOL's reliable Worthington compressor to provide the kind of service-free operation that makes your job easy and assures complete customer satisfaction.

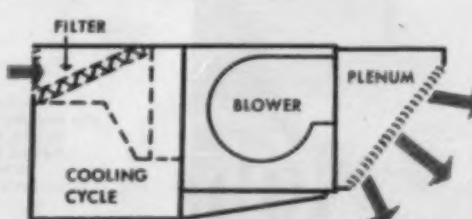
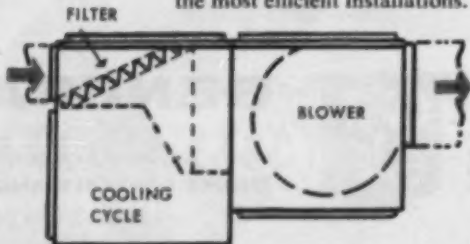
Get all the facts on the new FLEXI-COOL line and on Worthington's complete line of residential, commercial and central station equipment. Write Worthington Corporation, Air Conditioning & Refrigeration Division, Sec. A.5.55—AC, Harrison, N. J. A.5.55



Worthington's new FLEXI-COOL air conditioning line is sectional, completely flexible. Cooling cycle, filter and blower sections fit together like building blocks for either vertical or horizontal positioning. (Sections may also be installed separately in any location.) New unit adapts to water and air-cooled applications—all types of space limitations. In 2, 3, 5 hp sizes, FLEXI-COOL is less than 2 feet wide, only 2 feet high and 38 inches long. Overall dimensions slightly larger for 7½ hp unit.

FLEXI-COOL FITS TOGETHER LIKE BUILDING BLOCKS

Choice of vertical or horizontal positioning permits unlimited combinations of FLEXI-COOL sections. Shown are three typical arrangements for obtaining the most efficient installations.



Market--

(Concluded from preceding page) business dollar, the selling price to the buyer was driven down until once again you were fighting for survival as a result of insufficient gross profit.

"Each time this happened, the alert commercial refrigeration distributor analyzed the situation and attempted to provide more service to the customer. You learned how to merchandise the store and plan the store for profits. In many cases, you knew more about the successful operation of the store than the store owner himself.

"Soon it became apparent to you that you would also have to be an expert banker and financier. Many of you found that this turn of events was a blessing in disguise because the store owner was now forced to conserve his down payment cash by including everything

required for the new store into one blanket mortgage.

"If you had a financing plan available, you were now in a good position to sell the merchant all of the property required to operate his market. At this point, if you had taken all of the customer's available cash as a down payment for your order and you had not included air conditioning in the contract, the merchant would have had to do without it until he accumulated enough money to make a down payment with another contractor.

"Thus it becomes imperative that you now hold your mortgage open until the job is completed and the store is in for business. In this way last-minute items and extras to your contract can be included in your chattel before it has been filed. This serves a two-fold purpose in that the merchant is able to open with a complete market, and perhaps as important, it

assures you prompt payment for all of your work from the financing institution that purchased the paper," he explained.

"In summarizing the trend during the 10 post-war years, it has always been necessary to furnish the customer something in addition to the base piece of equipment that he desired to buy. The more intangibles like store planning, engineered installation, and financing, that you have been able to offer the customer, the more successful you have become, and you have been able to put more 'open water' between yourselves and your 'cut-rate' competition.

"Now, how does all this tie in to building more sales and profits in packaged air conditioning? First of all, most of you are specializing in sales to the food retailing industry. This field represents the biggest potential for air conditioning in the commercial market.

"Second, you have placed

yourself in a position of service to your customer. In many cases, besides selling him all of his equipment, you are acting as his architect, consulting engineer, and financial adviser. All of these services help to take you out of direct price comparison with your competitors. The more services that you can provide to your customer, the less competition you will have from 'low-overhead' dealers, who obviously are not set up to furnish these same services.

"The ability on the part of the commercial refrigeration distributor to find adequate financing for the merchant is rapidly becoming one of your best sales weapons.

"A few years ago, many of the leading fixture dealers in the country sold no air conditioning products.

"Most of you have now come to the realization that you not only were doing the merchant a

profitable sale by leaving the air conditioning equipment out of your sale of the market.

Potential Is There In Food Stores

"The potential for the air conditioning business in food stores is here. More sales under these conditions simply mean better salesmanship. 'The ability to understand and manage people and to act wisely in human relations' is the definition given to a man's social intelligence I.Q. A man possessing this ability has enormous possibilities in selling if he combines it with the following:

1. Intelligent study.
2. Practical planning.
3. Product and application know-how.
4. Understanding of customer's business.
5. Common sense.
6. The work habit.

"More sales under the conditions set out above can also result from a better service department. Good service can be one of your best salesmen. If all your jobs are working well, you are going to find that you get leads as a result of good, satisfied customers. Service can make or break your reputation in your area, particularly as you go further along.

Service Is Part Of Your Cost

"Remember that service is a part of your cost. We therefore recommend that you set up a service reserve as part of your cost. A dealer with a good service organization in packaged air conditioning is a dealer who will be around to see many 'birthdays' in this industry.

"More sales and profits will also result from sound engineering know-how. You don't have to be a consulting engineer to be a good packaged air conditioning engineer.

"A few years ago a line of packaged air conditioners consisted of 3, 5, and 7½-ton upright water-cooled units. Today you have a much wider range of packaged equipment including self-contained units for 3 to 40 tons, air-cooled systems from 2 to 10 hp., separate air-cooled condensers for almost any application of any size, and low-side air-handling units to fit any job without using valuable space.

"The distributor that knows his equipment and where to use it can stay well ahead of his competition. The trend is toward air-cooled equipment and low-side units that take up no selling floor area. Thus the need for good engineering know-how is ever increasing," he warned.

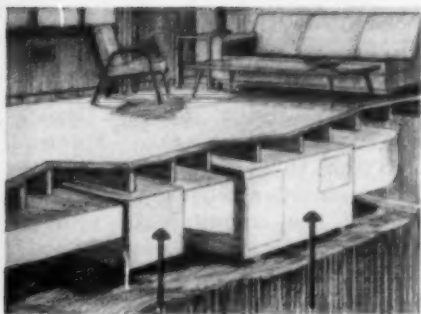
"Now we get to an ingredient that I like to call financial horse-sense. We have covered a lot of points so far that refer to the business of making money intelligently. However, there is a general application of financial horse-sense that must be applied to business over-all.

"Remember, you have to run a business profitably. You must be careful to hold your advertising expenditure to a reasonable figure. You must remember to hire salesmen realistically, not to go overboard on extra office personnel, and other items which come under the heading of overhead, such as high rental, too many truck, telephone and miscellaneous expense."

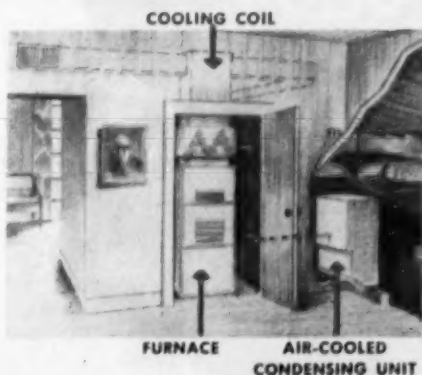
air conditioning design!

air conditioning line comes in solves any commercial or residential job!

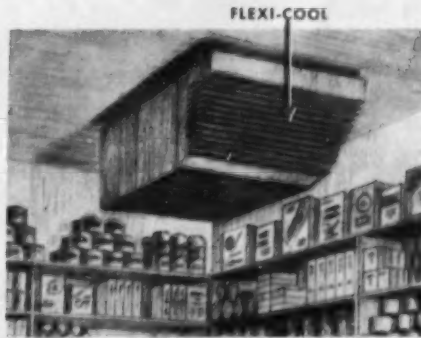
FLEXI-COOL FITS ANY SPACE



Crawl space: Here, FLEXI-COOL hangs in horizontal position from floor joists, is easily connected into existing warm-air heating system.

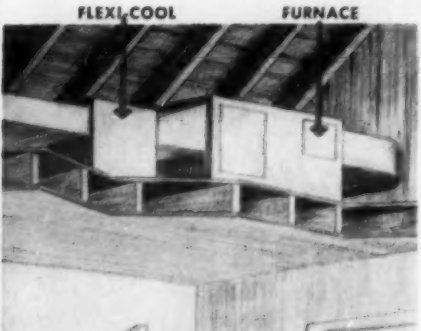


Outside the house: In this remote-type FLEXI-COOL installation, cooling coil in ductwork over furnace is connected to an outside air or water-cooled condensing unit.

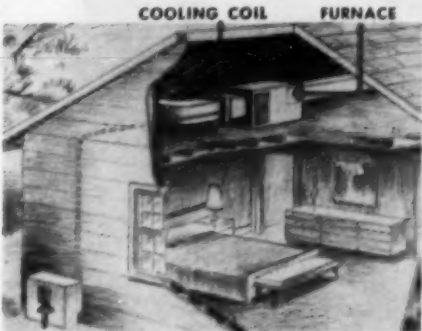


On a ceiling: FLEXI-COOL relieves valuable floor space for other duties by hanging from ceiling. Here, a desk or display counter can be added (or retained).

FLEXI-COOL MEETS ANY SITUATION



Dry heat: FLEXI-COOL cooling cycle can be connected to existing warm-air furnace, blower and filters.



Water-short area: Cooling coil installed in ductwork can be connected to waterless, electric air-cooled condensing unit.



Wet heat: With complete FLEXI-COOL unit installed in attic, inexpensive ducts along ceiling distribute cool air.

WORTHINGTON



CLIMATE ENGINEERS TO INDUSTRY, BUSINESS AND THE HOME

For more information about products advertised on this page use Information Center, page 24.

N. Y. Expects 100 Air Conditioned Buses by Year-End

NEW YORK CITY—One hundred air conditioned buses have been ordered by the New York City Omnibus Corp. for use on its lines in Manhattan and Queens, according to James J. McCarthy, president.

The first of the vehicles are scheduled to be delivered about April 15 for immediate test operation. After two months of operation, 40 or more buses, engineered to eliminate any flaws found in the test vehicle, will be put into operation. It is hoped to have all 100 buses operating by the end of 1956.

"We want to have our company make available in New York the first large-scale air conditioned mass transportation in this country," McCarthy

further pointed out in his statement.

The new buses will cost \$33,000 each, compared with \$25,000 for the buses now operated by the company. They will be equipped with 10-ton air conditioning units and will seat 50.

O. A. Sutton Names 3-State Distributor

PITTSBURGH — The Major Appliance Div. of the J. A. Williams Co. has been named tri-state area distributors for the Vornado line of air conditioners and air circulators by the O. A. Sutton Corp.

Vornado sales will be supervised by C. E. Stauffer, general sales manager, Major Appliance Div. Stauffer announced early future plans for the introduction of the 1956 Vornado line in a dealer presentation and sales education program.

Informative Sales Meeting Emphasizes Fundamentals, Renews Men's Enthusiasm

ATLANTIC CITY, N. J. — "There is no phase of your business as important as getting business and the way to get it is by holding good, informative sales meetings with your men," Harry N. Corbin, general sales manager for C. V. Hill & Co., Inc., asserted recently.

Corbin addressed the ninth annual convention of the National Commercial Refrigerator Sales Association here on the "ideal" sales meeting. Such a meeting, he said, is one which accomplishes its aim or purpose.

Like a football coach, Corbin said, the distributor must stress fundamentals to his salesmen until they know them forward and backward. As soon as he sees his men becoming slipshod

and neglecting basic fundamentals, he should make them practice over and over again.

Corbin noted that sales meetings fall into four general types. They are:

1. Presenting something new.
2. Renewing enthusiasm in the present line.
3. Building better personal relationships.
4. Psychology of selling.

Believing that renewing enthusiasm in the present line was one of the hardest things for a distributor to do.

"Your first thought should be 'What do I wish to accomplish?'" he began. "If you do not have the answer to that question firmly set in your mind, you have little chance of suc-

ceeding. Set your sights on a goal, then plan your meeting.

Follow Rules, Mechanics Of Good Meeting

"I am assuming that you will follow the rules and mechanics of a good meeting such as proper meeting place, proper timing, use of visual aids, etc., so that we can spend our time on subject matter.

"Renewing enthusiasm in present equipment is not easy and takes a lot of planning. We think of our equipment as the 'same old stuff.' But our customers may be seeing or hearing about it for the first time.

"You have to know your audience and how familiar they are with your subject.

"You have one purpose in mind—giving them more ideas and renewed enthusiasm so that they can make more sales and more profits—a project in psychology on your part.

"You must be in control of the meeting at all times, because it may turn into a gripe session if you are not careful. Remember that each man brings his personal problems with him and they tend to mold his attitudes.

"Plan your presentation so that his mind will be with you and your subject. These meetings are generally held on the man's own time and you certainly have no right to expect him to pay strict attention if you have nothing to tell him that is to his advantage.

Mold Meetings Around Fundamentals Often

"As often as possible, mold your meetings around basic fundamentals as stated before. Try not to let any of your people lose an order because he did not know the essentials of selling or the essentials of his product.

"Fundamentals of selling seldom change. However, the application of these fundamentals to a given problem is all-important and you should plan your sessions around the application as well as the fundamentals.

"Sales success is a journey, not a destination. It is not (Concluded on next page)

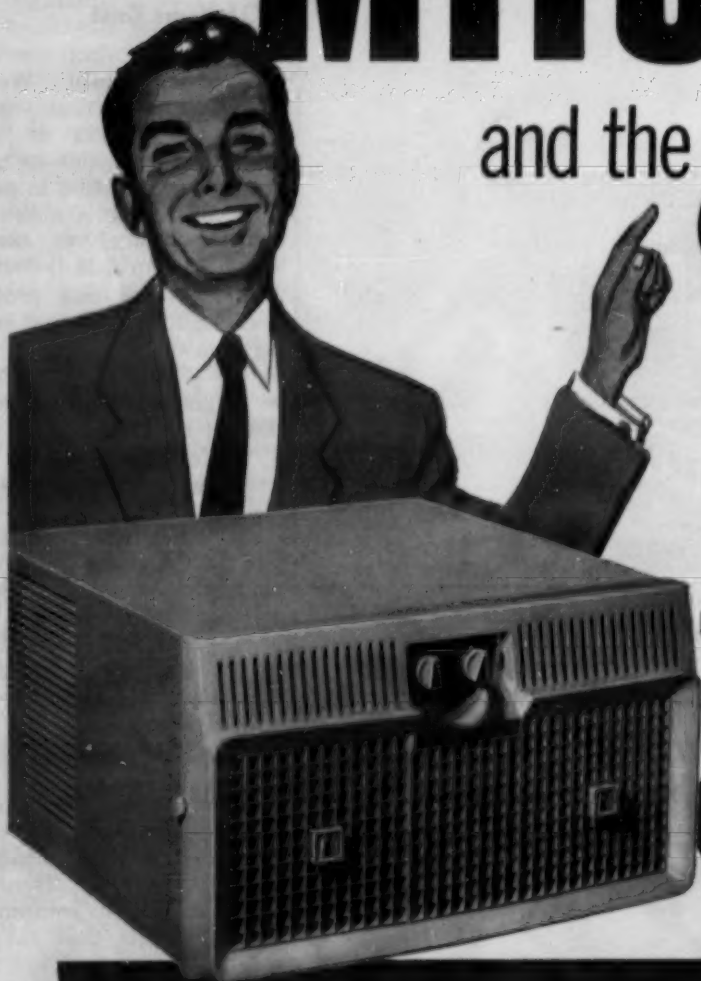
You get sales action right now with

MITCHELL

and the

Free Comfort Combination!

...this offer is limited



Free! Free! Free!

With a down payment or purchase of the 1956 Mitchell Room Air Conditioner, you give customers a \$39.95

De Luxe Northern Electric Blanket to close the sale now! Ask your distributor for details.

Start the season early with this consumer offer that makes sense

MITCHELL'S

Sensational **30%** on $\frac{1}{3}$

Guaranteed sales plan is extended through January 31, 1956

MITCHELL

Also a complete line of Mitchell Packaged Air Conditioners in both air and water cooled.

only MITCHELL

GIVES YOU MORE TO SELL IN 1956

DE LUXE LINE—In $\frac{1}{2}$, $\frac{3}{4}$, 1, 1 $\frac{1}{2}$ H.P. capacities. For rooms 400 to 945 square feet.

CUSTOM LINE—In $\frac{3}{4}$ and 1 H. P. capacities with Reverse Cycle or Resistance Dyna-Heat.

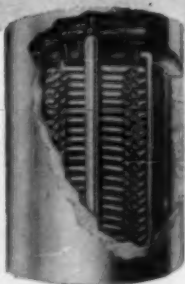
IMPERIAL LINE—In $\frac{3}{4}$, 1, 1 $\frac{1}{2}$ and 2 H.P. capacities. For areas from 600 to 1450 square feet.

Get full details from your distributor today

MITCHELL MANUFACTURING COMPANY AC-2 A Division of Cary Corporation
2325 Clybourn Ave., Chicago 14, Ill. • In Canada—19 Waterman Ave., Toronto
In Mexico—Mitchell-American, 78 Crimco, Gral. Anaya Mex. D.F.

Filtrine Since 1901

Tank Type WATER COOLERS



- ◆ Extra-large storage
- ◆ Safety from freeze-up
- ◆ Fast hourly recovery
- ◆ 20-year life construction

Capacities: 5 to 500 g.p.h.
Storage: 2 to 240 gals.

Water coolers for all uses factory-packaged with your condensing unit. Write for literature.

FILTRINE MFG. COMPANY
53 LEXINGTON AVE. • B'KLYN 38, N. Y.

Corbin on Sales Meetings--

(Concluded from preceding page) something that you reach and then stop. It is a continuous rehashing of the same principles. You build up enthusiasm to a point of where you make a sale. Then you start at the bottom and work up your enthusiasm for the next one, and so on.

Enthusiasm, Pride Go Together

"Enthusiasm and pride go together. When you are enthusiastic, you generally will get orders—orders produce pride—and then pride produces more enthusiasm.

"I have heard men say, 'Well, I get tired of saying the same thing over and over again.' Have you ever considered some of the plays that have run on Broadway for several years? The good actors go through the same routine twice a day, six days a week, yet the best ones practice between performances so that they will be even better.

"Your men are actually in the same category with good actors, they must practice to get better and better, and your meetings can bring about better presentations by them.

"Gentlemen, there are endless numbers of subjects on which you can build 'Ideal Sales Meetings.'

"Let me just offer a few suggestions for good, progressive sales gatherings. Product knowledge is a most important fundamental in your presentation.

A series of meetings could be held on just your Data Books alone. Our experience has proven that most of us know too little about it.

"We held a quiz one time during our traveling sales meeting, asking simple questions which we assumed were known by everyone. The results were most disappointing to say the least. We had prizes for ones who answered all the answers correctly—I think we still have some of them around the office.

"Doctors and other professional men have to study and review their education all the time, so how can we expect to pursue our daily work without doing the same? Take a section of the book at a time and build an interesting story around it.

Appreciation, Use of Product Is Subject

"Another subject could be Appreciation and Use of your Product. There are sources of sales which are neglected by all our organizations. By proving to your men that these establishments, such as drug-stores, bakeries, etc., are in need of some piece of equipment in your line, you will be opening a new field of prospects for them.

"How about comparisons? No army would ever go into battle without having first compiled information on the opposition. By the same token, your men should have sufficient information concerning competition and its products.

"Today's salesmen must have reliable information concerning competitors' products to effectively sell against him. The best place to get this information is at the local level.

"You should know what type of equipment or the make that

gives you the most difficulty and build up stories around your models to offset competition.

"Under a general heading of 'Sales Techniques' you could start a series of demonstrations by your men. Have you ever tried getting someone from your group to get up and give a demonstration? The results are amazing.

"One thing for sure, the rest of the men will brush up on their own performances before your next meeting. After a good demonstration is given, the men can offer some other points which they have used to advantage, so that everyone will get additional ideas.

"A biography of a sale presents an excellent topic. Let one of your salesmen follow a sale through from its beginning to the signing of the order. You may even want to bring in the

retailer to tell what he expects of a salesman and what impresses him most in a presentation.

Build Meeting Around Good Selling Movies

"Excellent meetings can be built around the use of good selling movies, such as 'How To Sell Quality,' 'Presenting Your Sales Case Convincingly,' and others.

"Canvassing techniques—some claim it is a lost art among the majority of today's salesmen. You can build up a wonderful sales presentation on the proper way to canvass.

"Photographs taken of local installations can be presented to these men along with ideas on getting the most out of stores right in your territory. In turn, these photographs can be shown to prospective customers who know the location of which you speak.

"Thousands of dollars are

spent by manufacturers in producing catalogs, but very seldom do any salesmen take the time to learn every item listed therein. Review the many selling features listed in them. You never know which one item is the one that clinched the deal.

Hold Contests

"It is a good point to have a contest among your own men. Create a little competition and somewhere during one of your meetings announce the progress of individuals.

"Testimonials are another subject. How to obtain them and use them to best advantage.

"The last major item about which meetings can be held is selling your own organization. Making your men proud of your organization is a very important factor. Tell them what your group offers that aids them in their work, such as:

"Service—explain what it means to them—how it keeps

old customers and gets new ones.

"Installation—show some pictures of installations in your area. Tell your men how to use these as showrooms for prospects.

"Layout service—explain the benefits of a good layout department. Tell how this can be applied to a customer's needs to obtain his confidence in the salesman and his organization.

"Actually, there are so many other topics for meetings, such as special sales techniques used by outside people, new advertising material, general business conditions, company policies to avoid later misunderstandings, that we could go on for hours.

"It is your duty and responsibility to pick out the subjects, plan the meetings, keep your men enthused, as a part of being a good distributor. If you want to keep your good salesmen good, or make them better, you have to plan, and plan again."

here are the
INSIDE FACTS
about the
NEW IMPROVED SPORLAN SOLENOID VALVES
with the
POWER PACKED Blue Seal COIL

Sporlan BLUE SEAL COILS
give
PEAK PERFORMANCE
because

- ① Extra winding provides reserve protection against burn out.
- ② Layer wound magnet wire, plus cotton thread spacing affords maximum insulation.
- ③ Twice dipped varnish and baking provides complete impregnation.
- ④ Final protective Blue Seal dip and bake assures moisture-proof seal.



SPORLAN

SPORLAN ENGINEERING FEATURES INCLUDE:

Extremely simple design—Few Parts...Sturdy—Take apart construction...Floating type stem and plunger assembly...Tight Closing—Pin and seat polished to a super finish...All large capacity pilot piston operated solenoid valves are equally applicable to both Freon-12 and Freon-22...Tighter closing is assured—New synthetic seating now available in Types-43-53 and 73...Interchangeability of Coils—One size Blue Seal Coil fits 5 different type valves...All sweat type connection valves are now delivered hand tight—saves valuable time in removing internal parts before applying valves to the system...A new universal mounting bracket for all Sporlan Solenoid Valves.

SPORLAN VALVE CO.
7525 SUSSEX AVENUE ST. LOUIS 17, MO.
EXPORT DEPARTMENT: 89 BROAD STREET, NEW YORK 4, N. Y.

For Peak Performance on all installations...buy Sporlan Solenoid Valves with the New Power Packed Blue Seal Coil...better still, Buy Sporlan Right Down the Line!

Inside Dope

By GEORGE
F. TAUBENECK

(Concluded from Page 1, Col. 1)

condensing units (in sizes from 1/2 through 3 hp.) are manufactured in France by G-M, plus a line of four forced-air commercial refrigerators and three types of ice-making coils.

Other Frigidaire appliance and commercial products are shipped to France insofar as possible under Government import restrictions. British Frigidaire products also supplement the volume and range of French production.

Frigidaire products are distributed in France through 125 direct dealers, of which 73 represent both household and commercial products. Five hundred sub-dealers relay Frigidaire products at the retail level.

European Refrigeration Is Picking Up

General Motors is investing \$8,000,000 during the next three years in France for new buildings and equipment to satisfy burgeoning demand for Frigidaire household and commercial refrigeration units, Mr. De Lorenzo tells us.

This program, undertaken at Gennevilliers, France, will provide approximately 900,000 sq. ft. for manufacturing, assembly, storage, and other facilities. When completed, this enlarged capacity will provide employment for an additional 600 workers. G-M of France now has 2,500 employees, an increase of 400 employees over a year ago.

According to Harlow Curtice, General Motors president, this European investment "is an expression of our confidence in the economy of France and its tremendous potential for our products, especially household and commercial refrigeration units."

General Motors of France produced more than 70,000 Frigidaire units last year, a substantial increase over 1954. Output has been limited previously by existing capacity. Market potential: Only 10% of French homes have household refrigerators.

Did the Reds Have a Word for It?

Touring Russian housing experts explored the experimental air conditioned village in Austin, Texas, at the invitation of the National Association of Home Builders.

"This phase is one of the main things we're interested in," I. K. Koziulia, Soviet minister of city and urban building, revealed. Along with the nine other Russian housing experts he was having his first look at residential units which cool in summer and heat in winter. He frankly admitted he was "very fascinated." Reporters noted it was one of the tight-lipped minister's few words of praise during his entire American visit.

P. A. Spysnov, another Russian building expert from Moscow, instructed a State Department interpreter to tell his hosts he was "impressed" by the air conditioning. Spysnov would "like to live" in an air conditioned house himself but would

"refuse to move to this climate in order to do so."

Both Koziulia and Spysnov declared the "greatest merit" of Austin Village air conditioning is the fact the joint cooling-heating operation requires no technical knowledge on the part of homeowners.

The experimental village was set up to test, by actual use, 22 different types of home heating and cooling systems. The homes were built and sold by individual contractors but planned in co-operation with architects and engineers taking part in the venture—sponsored jointly by the air conditioning firms and the National Association of Home Builders.

Incredible Travelogs

Odd news item: Vincente Austra of New Zealand sailed to Lanao in the Philippines last month with a cargo of food and

medicine for sufferers from an earthquake. Upon delivering his supplies, a native woman asked him to roll up his sleeves and trousers, and remove one shoe.

To her obvious pleasure and excitement, she observed that rescuer Vincente had a nasty scar on his right arm, a birthmark on his left thigh, and moles on both ankles—identifying marks of a missing Sultan who had been kidnaped during the Japanese occupation.

Lucky Vincente thereupon was installed as Sultan Omar Saoymayampaso Mindalano II while half a million obeisants cheered. He knew a good thing when it hit him in the face!

Reminds us of Dope's former roommate, George Christensen, who was for a month King of Tahiti's neighboring island, Moorea. Big George, an all-time-great Detroit Lions tackle, vacationed in the South Pacific. On a side trip to Moorea he van-

quished a local villain three hours after he arrived. For the remainder of his "stay" there Big George was judge, jury, and Head Man of this tropical isle.

Total power he had (based on the fact that he could lick anybody on the island). Choice of companions, best of the food available, kowtowing from everyone. King for a Day! He presided at weddings, funerals, religious ceremonies, lawsuits, and whatnot—until he became tired and bored with miniscule responsibilities.

Since then George Christensen has become a fabulously successful industrial diamond broker, and an international Man of Mystery. He divides his time between Paris, London, Brussels, Africa, and the Middle East, his partner in Utah, and his family in Grosse Pointe, Michigan.

When asked the secret of his fantastic success, he answers

invariably: "I always tell the truth—a new element in this game."

More Definitions

COMMITTEE. A group which keeps minutes but wastes hours.

FIRMNESS. An admirable quality in ourselves that's pure stubbornness in other people.

HOBBY. Something you go goofy over to keep from going nuts over things in general.

INFANT PRODIGY. Grandchild.

IN-LAW. The one law you can't flout.

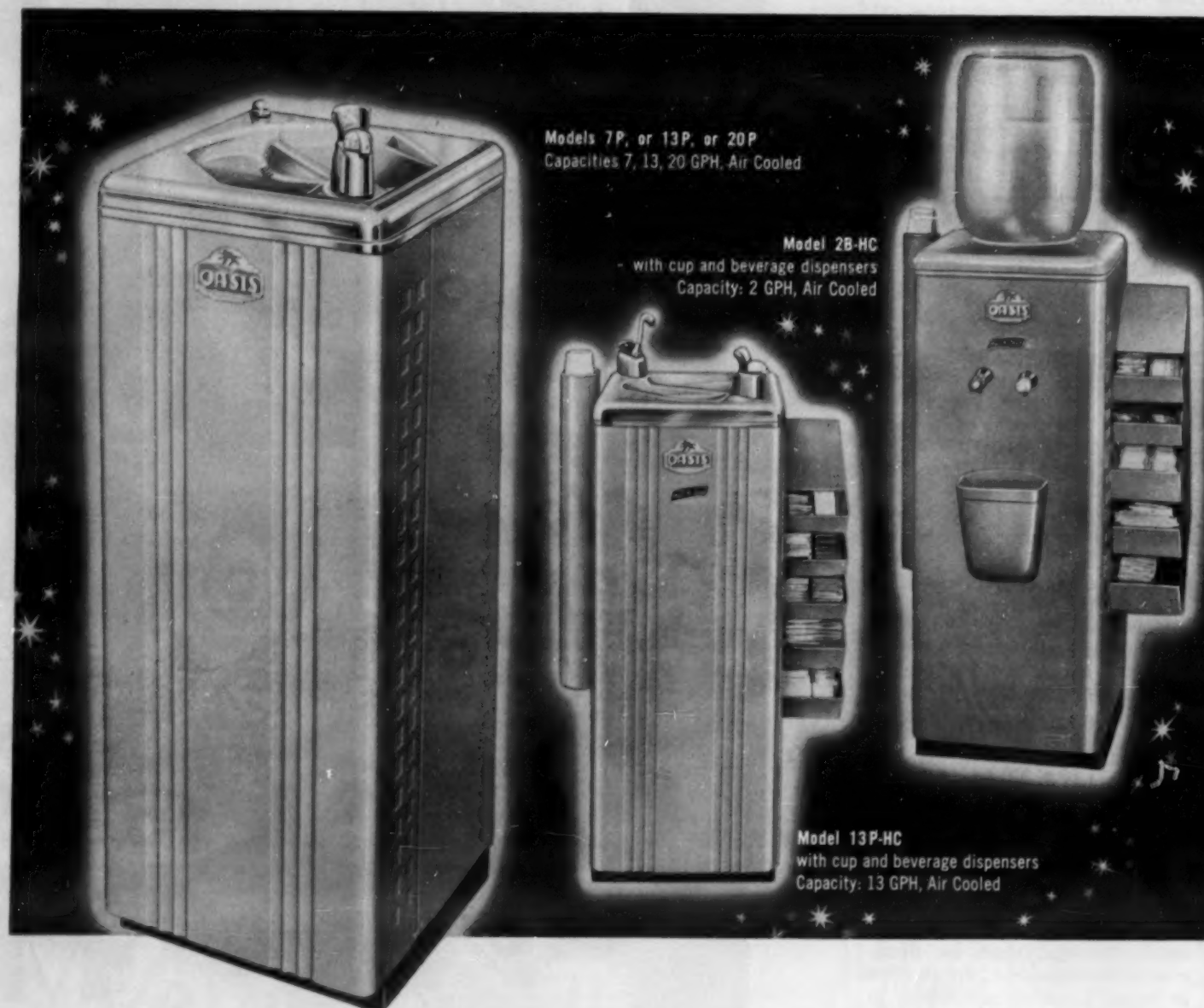
JOINT ACCOUNT. A bank account in which a husband deposits money and his wife draws it out.

MONOLOGUE. Conversation between husband and wife.

PHILOSOPHY. System of being unhappy intelligently.

INTUITION. Suspicion in skirts.

ANNOUNCING the Dazzling CONSTELLATION



Here's a new series of wonderful water coolers! The Constellation Series has much bigger capacities . . . re-styled, high styled cabinets as sleek as a comet. And they're all decked out in Desert Dawn, the freshly created color-tone—exclusively Oasis!

The very pinnacle of grace and elegance is the glittering, gleaming top—a regal crown of sparkling, always-clean stainless steel. A luxurious, new, diagonal, divided design quickly whisks away water in the twinkling of an eye. Yes, here is true magnificence and beauty.

The Hot-Selling Hot 'n Cold . . . The amazing Hot 'n Cold! The water cooler that gives piping hot water for instant beverages . . . and instant control of the coffee-break. This is a real profit maker . . . the fast moving, nationally advertised water cooler that has year 'round sales appeal! And now there's a bottle type Hot 'n Cold with a refrigerated compartment!

Star-Spangled Features . . . Beautiful? Yes! But wonderfully efficient, too! In addition to all the gleaming features of the new Constellation Series, they also boast all the fabulous selling points that have made the name "Oasis" famous. The Oasis Pre-Cooler and the wonderful, new Capacity Booster double the volume of cool water. The No-Squirt Bubbler gives a smooth drink regardless of variations in water pressure. The entire water cooler is engineered for quiet operation. And the unbeatable Oasis 5-Year Factory Warranty!

Complete Line . . . There's an Oasis Water Cooler for every installation: hand or foot operated models; two to 35 gallon capacities; standard or Hot 'n Cold; bottle or pressure; stainless steel, heavy duty, explosion-proof, air-sealed industrial, refrigerated compartments, cafeteria and juvenile. Each a paragon of symmetry and functional splendor! Send today for full information on this new water cooler line!



C. A. LESSING



R. G. MOZLEY

Copeland Names Mozley, Lessing

SIDNEY, Ohio—Raymond G. Mozley has been named chief applications engineer and Charles A. Lessing, formerly of International Harvester Co., has been appointed chief laboratory engineer of Copeland Refrigeration Corp.

The appointments were announced by O. H. Buschmann, vice president.

"The establishment of sepa-

rate, related departments stems from our ever-growing development programs in the air conditioning and commercial refrigeration motor-compressors," Buschmann stated.

Mozley has been in charge of laboratory and applications development activities since joining Copeland in January, 1952. Prior to that he was refrigerations applications specialist for Hussmann Refrigeration for 10 years, in charge of military and commercial refrigeration applications, product development, and laboratory test programs.

Before joining Hussmann, Mosley was associated with P. E. Daubenspeck Inc., a Pontiac, Mich. commercial refrigeration contractor in application and service programs. He is a member of ASRE and RSES.

Lessing most recently was associated with International Harvester in charge of a section of that company's refrigeration

product development and engineering laboratory. He joined Copeland when International Harvester departed from the refrigeration products field. He is a member of ASRE.

Lessing was graduated with the Bachelor of Science in mechanical engineering from the University of Illinois in 1949. During World War II he served in the Pacific area as an army artillery officer.

J. B. Rodgers Forms New Phoenix Firm

PHOENIX, Ariz.—J. B. Rodgers, formerly a partner in Rodgers & Dean Plumbing and Air Conditioning Co. here, has formed the J. B. Rodgers Air Conditioning Co., operating from 4255 N. Seventh Ave. He continues with the Carrier line previously handled by the partnership.

Plant Maintenance & Engineering Show --

(Concluded from Page 1)
tion management firm, produce both events.

More than 20,000 executives and engineers are expected at the show and 2,500 at the conference.

The exhibit area will cover 100,000 sq. ft., about 10% larger than the last show held in Chicago and 60% larger than the Philadelphia show in 1952. Exhibits will cover 278 basic types of equipment, products, and services. Several firms in the refrigeration industry will display such products as water coolers.

There is no restriction on attendance except that the registrant must be connected with the industry.

A group of 45 experts, drawn from all types of industries, will lead the discussions at the con-

ference which also opens in Convention Hall Jan. 23.

Most conference sessions are general in nature and cover all types of industries. However, five industries will receive special attention with separate sessions devoted to each. These include air transport, chemical, petroleum refining, paper mill and paper product, and textile.

Among new topics scheduled this year are "Yardsticks to Measure the Effectiveness of Maintenance," "Equipment Replacement Policies," "Design and Operation of Maintenance Shops," "Relationship of Maintenance and Purchasing Departments," "Insuring Effective Utilities for the Plant," and "Making the Maintenance Personnel Control-Minded."

The 1956 program will be arranged in three groups. There will be two general conferences, which all registrants attend; eight concurrent sectional conferences, at which papers will be read but the audience will split, and 16 concurrent, informal round tables for discussions of special problems. Each of the eight sectional conferences, and the 16 round tables, will be repeated during a second evening.

Advance registration cards and hotel information may be obtained from Clapp & Pollak, Inc., 341 Madison Ave., New York 17, N. Y.

New

SERIES BY OASIS

Model 13P-L, Juvenile
Capacity: 13 GPH, Air Cooled



Model BR-MC
with refrigerated compartment
and cup and beverage dispensers
Capacity: 1 1/2 GPH, Air Cooled



Model 3 PR
with refrigerated compartment
Capacity: 3 GPH, Air Cooled



Strongest Advertising Program Ever Exploded Behind Water Coolers!

Your customers will see and read powerful advertisements in Time, Newsweek and other magazines, month after month throughout the year . . . including a smashing two-page announcement.



OASIS WATER COOLERS

The Ebco Manufacturing Company, Columbus 13, Ohio
Manufacturer of the most complete line of water coolers

SEE THE NEW OASIS CONSTELLATION WATER COOLERS IN BOOTH No. 301

at the Plant Maintenance and Engineering Show
Convention Hall, Philadelphia, January 23 to 26

DISTRIBUTED IN CANADA BY G. H. WOOD & CO., LTD.

THE EBSCO MANUFACTURING COMPANY
Department 11, Columbus 13, Ohio

Without obligation, send the whole Constellation Story to:

name _____
company _____
address _____
city _____ zone _____ state _____

For more information about products advertised on this page use Information Center, page 24.

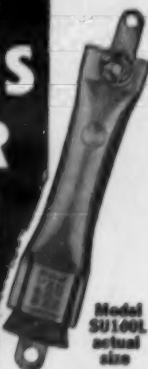
Kold-Draft Halts Operations, Offers Assets at Auction

ST. LOUIS—Kold-Draft of St. Louis, Inc., refrigeration contractor here, has discontinued operations and its assets were to have been offered for sale at public auction on Jan. 9.

The assets have been assigned to William F. Sindel by the board of directors. Sindel said that he will report to creditors when an appraisal of the assets is completed and the extent of the company's liabilities under mortgages is known.

Inability to obtain satisfactory financing for its customers made the firm unable to continue further operation, Sindel said.

FAN MOTORS NEVER BURN OUT



when protected with



MECHANICAL INDUSTRIES
PRODUCTION COMPANY
223 ASH STREET - AKRON, OHIO

'Yesteryear' Air Conditioned 'School On Wheels' Opens 5-Year 250-City Tour

SYRACUSE, N. Y.—Nostalgic oldtimers who yearn for the "little red schoolhouse" will get a chance to relive their childhood days as "Schoolroom Progress U.S.A." opens its nationwide tour of 250 major American cities.

Only one change will be found. An estimated 3,000,000 visitors to the exhibit's "old" schoolroom will enjoy the comfort of air conditioning.

Conditioned climate inside the specially built railroad car is assured by a 5-hp. Weather-maker air conditioner installed by Carrier Corp., one of 28 American business organizations participating in the "school on wheels."

Unlike most other stationary commercial cooling units, the

Carrier Weathermaker faces a double-barreled challenge—constant travel under every conceivable climatic condition, as well as a comfort conditioning "problem" posed by long lines of visitors within the exhibit's necessarily limited interior.

During the exhibit's proposed five-year tour, the Carrier unit will supply over 9,000 tons of cooling.

Commenting on air conditioning in the classroom, Cloud Wampler, chairman and president of Carrier, predicted that it would play an increasingly important role in helping to solve the country's school shortage.

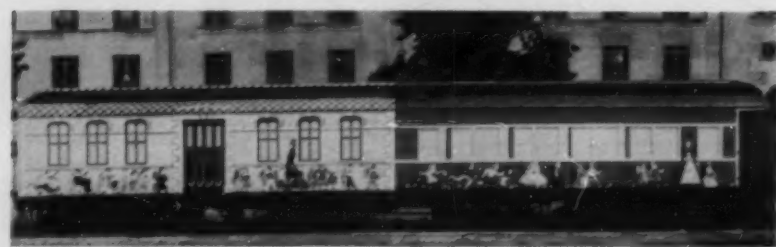
"One single, inescapable fact is that air conditioned classrooms make year-round school

operation feasible," Wampler said.

The importance of this possibility, Carrier's chief executive explained, is that full-calendar education can add 25% to the nation's present school capacity without the laying of a single brick or cornerstone.

The two-car school on wheels is being sponsored by the Henry Ford Museum and Greenfield Village, and The Encyclopedia Americana.

Three reconstructed nineteenth century classrooms and exhibition gallery constitute the "yesteryear" car. A pioneer log cabin schoolhouse of 1810, similar to one in which William McGuffey taught, the Scotch Settlement schoolhouse of the middle 1800's in which Henry



AIR CONDITIONED "School on Wheels" with open fireplaces, chalk slates, split log benches, and birch rod are displayed in this "Schoolroom Progress U.S.A." car which will visit every major city in a five-year tour. The display features air conditioning installed by Carrier Corp., one of 28 participating organizations.

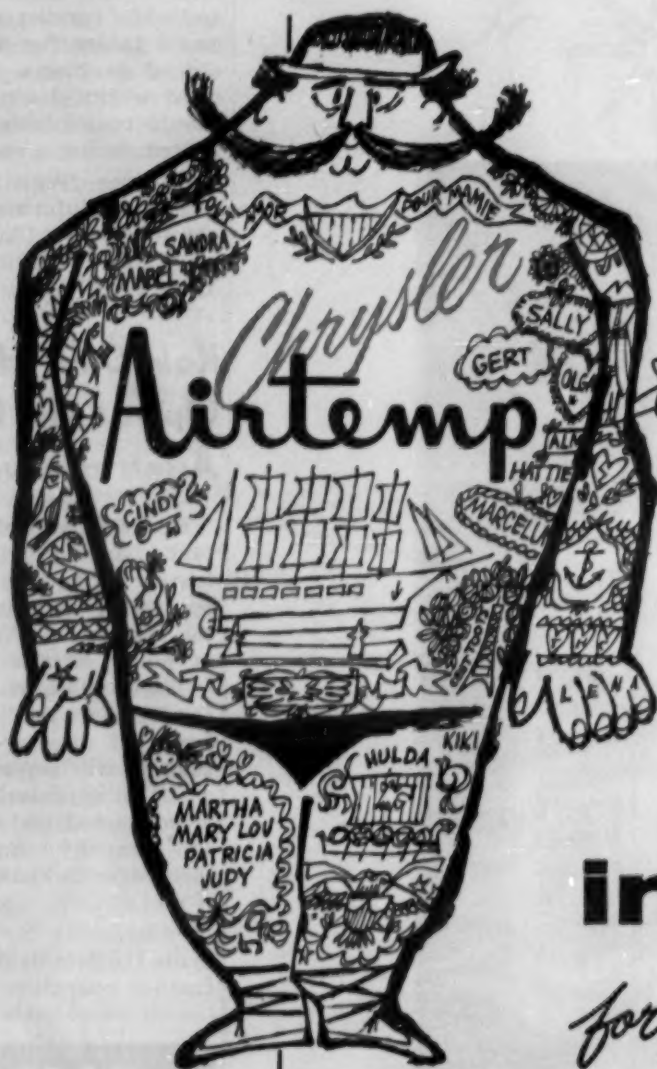
Ford studied, and a city classroom of the '90's will be displayed.

The "old" schoolrooms contain open fireplaces, whale-oil lamps, split log benches, birch rod switches, slates, quill pens, McGuffey Readers, and books and writing implements used by famous Americans.

In contrast to the deficiencies and handicaps of these early schoolrooms, the "new" car exhibits five modern classrooms.

Ultra-modern classroom architecture, equipment, and audio-visual devices are shown, along with architect's drawings and photographs of outstanding examples of present school buildings.

The "new" car consists of kindergarten, upper elementary, home economics, manual arts, and office practice classrooms. All five have been designed by award winners in the American Institute of Architects Honor Awards program.



Back of Airtemp
is CHRYSLER—
the greatest name
in engineering!

what's in a name?

for you—more sales
of heating and cooling
when it's AIRTEMP by Chrysler!

Airtemp residential heating and cooling equipment is built and backed by Airtemp Division of Chrysler—the name people associate with engineering leadership in products of only the highest quality.

With Airtemp, you never have to spend time trying to sell the name . . . the name helps you sell the equipment!

There are many other reasons why the Airtemp Franchise can mean more business for you—in heating and cooling.

Get all the facts! Write Department AC-1, Airtemp Division, Chrysler Corporation, Dayton 1, Ohio.



THE FORWARD LOOK IN

HEATING • AIR CONDITIONING FOR HOMES, BUSINESS, INDUSTRY

For more information about products advertised on this page use Information Center, page 24.

Hessmer Appoints Watts To Sales, Service Post

TULSA, Okla. — Glen Jennings, manager of the Tulsa office of The Hessmer Co., distributor for several lines of air conditioning equipment, has announced the appointment of John R. Watts as head of sales and service for The Hessmer Co. in eastern Oklahoma.

The Hessmer Co., which also operates a modern sheet metal shop for making ducts used in air conditioning installation, has offices in Oklahoma City, Bartlesville, and Tulsa.

The owner of the firm, E. L. Hessmer, lives in Oklahoma City. A son, C. W. Hessmer, Tulsa, heads the Tulsa office of the company.

Watts has been in the air conditioning business since 1946. He was associated with Carrier dealers and Minneapolis-Honeywell and worked as a sales engineer before joining the Hessmer company.



Charlie Eskridge says: "Having William Schaller Co. produce your catalog can save you lots of headaches and extra work. I know. They've turned out two for us . . ."

Charles Eskridge
Henry V. Dick Co.

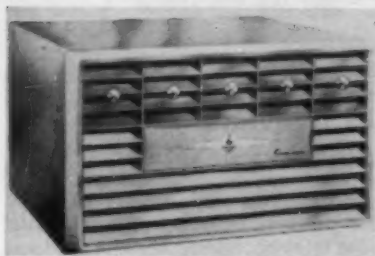
REFRIGERATION WHOLESALERS: Check these advantages of Schaller-made catalogs:

- ✓ Prepared to your individual needs.
- ✓ William Schaller Co. does the work; you don't have to. (Don't forget, cost of a catalog is a fully deductible item . . . your extra time spent preparing one is not.)
- ✓ Prepared under supervision of a refrigeration engineer who knows the business.
- ✓ Top quality appearance. You wouldn't make sales calls in overalls—don't risk your reputation with a "home-made" catalog.
- ✓ The recognized supplier . . . foremost producer of Air Conditioning and Refrigeration Wholesalers' catalogs.

Write for full information, prices and a sample catalog.

WILLIAM SCHALLER CO., Inc.
270 FARMINGTON AVENUE
HARTFORD 5, CONNECTICUT

Emerson 'Germ-Killer' Room Unit--



INTRODUCED recently by Emerson Radio and Phonograph Corp. was this "Electronic Germ-Killer" room air conditioner. It will be helpful in sick rooms, nurseries, and hospitals, Emerson stresses. It is claimed the electronic device destroys 99.6% of airborne bacteria, by laboratory test, in an average-size room within 10 minutes.

(Concluded from Page 1)

ampere models. The 1956 units range from 1/3 to 2 hp. and are list priced from \$188.

The new line also includes residential and commercial units.

Abrams said that while the new Electronic Germ-Killer room air conditioner provides extra safety health measures in all locales, it will have particular significance in sickrooms, nurseries, and hospitals.

A vital feature of the unit is what he described as "Three-Way Action"—it can be operated while cooling, while ventilating, or independently.

He stressed the fact that this tri-operating aspect of the unit permits the Electronic Germ-Killer to be effective all year around; it can be operated during all four seasons by itself or in conjunction with the cooling or ventilating of the premises.

According to Abrams, bacteria are destroyed by ultra-violet rays as air circulates through the unit. An ultra-violet electronic tube located behind the front grilles casts off a soft blue light in operation, it was pointed out.

The germicidal unit will be available on all 26 1956 models for about \$50 more, it was reported.

wrung out of the air without any drip or spray."

Also cited was flexible mounting that "permits the units to fit any window, including casement windows, and to be easily adjusted to 15 different positions, ranging from flush in the room to flush with the building."

Abrams placed special emphasis upon the four new 7 1/2-ampere units that "eliminate the need for expensive rewiring jobs required for installation in many homes." He claimed that each of these models consumes no more power than a toaster.

Among the other features of the 1956 line, Abrams concluded, are single knob control located in front of the unit, full weather control, multi directional forced-air, and "instant and more powerful cooling" because of "Super-Size" cooling coils.

'Sellevision' Shows Amana Conditioners In Promotional Kit

AMANA, Iowa — A "Sellevision" display that combines light and action to focus customer attention on the new Amana line of "Air Command" air conditioners highlights the 1956 promotional kit being offered to dealers and distributors by Amana Refrigeration, Inc.

Selling features of Amana air conditioners appear one at a time on continuously moving tape in the "Sellevision" display's center opening. The unusually lighted display can be mounted on either Amana's De Luxe or Year 'Round model.

Another feature of the Amana kit is a "comfort calculator" by which a salesman can compute rapidly and accurately the size of conditioner needed.

Hotel Adds Room Air Conditioners

MERIDIAN, Miss. — Window air conditioning units were recently installed in most of the Meridian hotel's 70 guest rooms, it was reported in the Hotel World-Review.

According to Herbert Arky, manager, the installation was included in a hotel renovation and creation of 15 new rooms in the annex.

York Names Exclusive Room Unit Distributor

YORK, Pa. — H. Schultz & Sons, Inc., Newark, N. J., has been named exclusive room air conditioner distributor for York Corp., it was announced by R. E. Cassatt, manager of sales, commercial Div.

The Newark firm was started

in 1921. Its business has two divisions, housewares and appliances.

Treasurer and general manager of the firm is Samuel Schultz. Herman Charnick is controller, Harry Jacoby is sales manager of the Appliance Div., and Robert J. Higgins is the advertising manager.

Lewyt Appoints D. C. Distributor

BROOKLYN — Miller Supply Co., Washington, D. C., recently was named area distributor of Lewyt cooling units, Irving Bottner, vice president of Lewyt Air Conditioner Corp., maker of built-in wall air conditioners, announced recently.

Lewyt currently is setting up distributors in the U. S. and Canada, as was revealed in the Sept. 26 AIR CONDITIONING & REFRIGERATION NEWS.



a **VIKING** tradition

• Every Viking had to become master of the traditional bow and arrow of his people. In its great strength, resilience and toughness rested his ability to fight, to hunt, to protect himself and his family. His very life depended on it!

Today, in the commercial refrigeration and air conditioning industry, the name **VIKING** in copper tubing has also become synonymous with strength and durability. Through its quality and precision **VIKING** has set a standard for the industry . . . and **VIKING** craftsmen, true to the tradition of their namesakes, continue to develop the very finest in copper tubing . . . a tubing worthy of the name **VIKING**!



VIKING copper tube co.
CLEVELAND 10, OHIO

PRECISION DRAWN SEAMLESS COPPER AND ALUMINUM TUBING

EXTRA STRENGTH

The proper kind of strength and ductility is vital in tubing used for refrigeration and air conditioning purposes. Copper tube possesses these qualities to a far greater degree than other types of tubing. Its uniform temper assures trouble-free fabrication.

EXTRA FLEXIBILITY

Viking Copper Tube is soft and pliable, yet exceedingly rugged. It saves time and labor because it can be coiled, formed, flared and expanded quickly without danger of fracturing or splitting.

CLEAN AND DRY

Viking Copper Tube is triple-sealed at the ends, stays dry and absolutely dirt-free. The seal is made to pass through any opening large enough for the tube itself. It's clean . . . it's bright . . . it's dry!

In addition to previously introduced portable units that can be wheeled from room to room, and the Electronic Germ-Killer units, Abrams announced another major feature, "Jet Scoop," an "exclusive condensate removal process which completely disposes of moisture

They'll
Do It
Every
Time

by

Jimmy
Hatlo



Mechanical Brains? Ask the Man Who Owns One!

Now they tell us! Behemoth electronic computers are proving costly and bothersome to install, to maintain, to man—and bugs need to be eliminated.

True, "automation brains" are cutting business costs as advertised. At the same time new problems are arising. Furthermore, later innovations are obsoleting expensive computers which have been in use only a few months.

We hear, for example, that mighty General Electric headached after it installed a huge mechanical brain to do payroll accounting for 8,500 employees at its Louisville, Ky., appliance complex. We'll spare you the grisly details, because they're hearsay. Suffice it to say that only a General Electric could overcome them.

Although big, general purpose computers first were put to work about four years ago, they have been utilized in business and industry substantially only recently. Army, Navy, and Air Force grabbed off most of those produced earlier.

All machines need human attention, guidance by people. And there are too few trained technicians available for the task ahead of us in this respect. Dr. H. R. J. Grosch, head of General Electric computer activity, avers that the need for operators who can introduce information properly into "mechanical brains" **BRAINILY** will double annually.

There are only 100,000 such technicians in the country now. "We won't be able to train "the half million we'll need soon," the G-E technician concludes.

Most present-day computers are turned out by International Business Machines Corp. Its "U.P.P." series consists of four gigantic models which rent for about \$30,000 a month. Although IBM won't sell these monsters, their value is estimated to be near \$1 million each.

Widely-publicized Univac, seen on television in the last presidential ballot counting, is made by the Remington Rand Div. of Sperry Rand Corp., second largest computer manufacturer. Burroughs (Detroit) hopes to introduce a commercial all-purpose computer next summer priced at \$750,000. Radio Corp. of America, Datamatic Corp. (owned by Minneapolis-Honeywell Regulator Co. and Raytheon Mfg. Co. together) will enter the market this year, also.

Last year the Detroit Edison Co. began to train operators for a computer which will receive meter readings, calculate charges, and pop out printed bills for 1.2 million customers. A savings of about \$1 million a year was predicted. However, it may take two years before Detroit Edison even begins to break even on its investment.

Great shortage exists among those top level experts who rig the robot machines for the extremely complex problems they are called upon to solve. As yet, few "data processing" degrees have been granted by universities!

Even though the "mechanical brains" create new problems while solving old ones, said robots probably are here to stay—to aid the giants of business become more gigantic.

Handy Way to Subscribe

To See the Industry In Action EVERY WEEK

Keep up-to-date on what's going on in your industry. You'll see action weekly in **AIR CONDITIONING & REFRIGERATION NEWS**. Covers latest news and gives you top how-to-do-it reports on commercial and residential air conditioning, commercial and home refrigeration: manufacturing, contracting, distributing, retailing, and servicing. Read the Industry's newspaper for profit every week. Only \$5.00 per year, \$2 issues.

AIR CONDITIONING & REFRIGERATION NEWS
450 W. Fort Street — Detroit 26, Mich.

Gentlemen:

Send the NEWS every week for one year.

☐ \$5.00 enclosed ☐ Bill me ☐ Bill Company

Name

Company

Street

City Zone..... State.....

1-16-56

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

Trade Mark
registered
U. S. Patent
Office:
Est. 1936

AIR CONDITIONING & REFRIGERATION NEWS

Copyright
1956,
Business News
Publishing Co.

F. M. COCKRELL, Founder

'The Conscience of the Industry'

Published Every Monday by BUSINESS NEWS PUBLISHING CO., 450 W. Fort St., Detroit 26, Mich. Telephone Woodward 2-0624. Subscription Rates: U. S. and Possessions and Canada: \$5.00 per year; 2 years, \$9.00; 3 years, \$12.00. All other countries: \$10 per year. Single copy price, 40 cents. Ten or more copies, 30 cents; 50 or more copies, 20 cents each. Send remittance with order.

GEORGE F. TAUBENECK
Editor and Publisher

PHIL B. REDEKER, Editorial Director

C. DALE MERICLE, Associate Editor

John Sweet, Assistant Editor

Hugh Mahar, Assistant Editor

George Manning, Assistant Editor

Robert E. Lacey, Assistant Editor

Warren L. Jones, Circulation Manager

Marilyn Goss, Subscription Manager

E. L. Henderson, General Manager

Robert M. Price, Adv. Mgr.

Allen Schildhammer, Western Adv. Mgr.

Joe Sullivan, Adv. Representative

Alice Barrow, Advertising Production Mgr.

Walter J. Schuler, Gen. Production Mgr.

Advertising Offices:

New York, 531 Fifth Ave.
Murray Hill 7-7158
Robert M. Price

Chicago, 136 N. LaSalle St.
Franklin 2-8093
Allen Schildhammer

Detroit, 450 W. Fort St.
Woodward 2-0924
Joseph B. Sullivan

Member, Audit Bureau of Circulations. Member, Associated Business Papers.

VOLUME 77, No. 3, SERIAL No. 1,400, JANUARY 16, 1956



OFF THE CHEST

North Chicago Div.,
Houdaille Industries, Inc.
1900 Foss Park Ave.
North Chicago, Ill.

Editor:

In the "Inside Dope" column in your Dec. 12 issue of **AIR CONDITIONING & REFRIGERATION NEWS**, I note your mention of the "undisputed champion of the St. Christopher Athletic and Inside Straight Society" as being Joe Bundy of the Dugan Tubing Co.

We have long been looking for a good source of brazed steel tubing, and wonder if you could give us the address of this firm. Is the Joe Bundy you refer to any relation to Phil Bundy of the O'Connell Tubing Co.?

R. A. JOHNSON,
Divisional Sales Mgr.

127 Cedar St.
Hot Springs, Ark.

Editor:

Just wanted to remind you that our mutual friend, Bill Rhoades, who passed away recently, was a pioneer. He was manager of Guardian (now Frigidaire) when Mr. Durant purchased it for General Motors.

Have been trying to collect some stories of the old days for you—and have Bill's contributions here in my file. Think some items of those early struggles would be interesting. They would show today's boys how good they have it now. I remember when every one but myself in a certain organization held off on giving any news to your Uncle when he first started your paper. Guess you made us sympathetic to his problems, because we gave you news and advertising.

Know you are doing well because I get a chance to read your paper. You still write well. Am past 75 now, and think a lot of those days when Nat B. Wales came to Mr. Goss (Kel-

vinator) with an electric ice machine. My job was handling service calls from Mrs. Goss in the first one installed in their home. Her big complaint was the repair man smoked his pipe in the basement. After that, I put Norge in business.

Best to you, George. Keep going till you're 75.
R. E. ("DENNY") DENSMORE

Refrigeration Engineering, Inc.
7250 E. Slauson Ave.
Los Angeles, Calif.

Editor:

Thank you very much for the very nice article published in the Dec. 19 issue of **Inside Dope** about **RECOLD'S MUSEUM**. I know your article will help to locate and preserve antiques that would otherwise be destroyed. (See enclosed letter).

H. T. JARVIS,
President

Dear Mr. McHay:

You made my mother's son "Hy Jarvis" extremely happy today, when you took time out from your work to bring over the present to me, the exceptionally fine collection of collector's items for our **RECOLD MUSEUM**, as a result of having seen the article in last week's **AIR CONDITIONING & REFRIGERATION NEWS**.

It's friends like you who make life really worthwhile and a project, of this type, interesting and educational. Your cooperation will be felt over a long period of time by the newcomers yet to start in our great industry.

Thank you, again, for your cooperation and your interest in the **RECOLD MUSEUM**, and every good wish to you and yours for a Happy Holiday Season.

H. T. JARVIS,
President

SLANTS ON SERVICE

Second Switch Improves Time Clock Defrosting

By correctly installing and wiring a second low pressure control switch a simple time clock defroster can be converted into a time-pressure defrost control with improved defrost cycles for all commercial fixtures.

A. B. Sartin, who operates the Refrigeration Center in Enid, Okla., has made several such conversions in supermarkets "when it was impossible to obtain authority to purchase and install a properly designed time-pressure control switch," he told the NEWS.

IMPOSSIBLE TO SET CLOCK FOR ALL CONDITIONS

It's virtually impossible, Sartin says, to set the defrost interval on a straight time clock to provide satisfactory defrost cycles under all conditions, particularly with normal temperature open type cases.

Under low humidity, the coils will defrost well within the time cycle, and the case will warm up before the clock cuts in the compressor. If the humidity is higher than normal, the coils may not defrost completely. Over several other defrost cycles, this could greatly restrict air flow through the coils.

To get around these problems Sartin installs a second low pressure switch (in addition to the one already in use for controlling machine operation), and wires the switch contacts in parallel with two contacts of the time clock switch.

"Set the newly-installed l.p. switch to cut in at approximately 40 p.s.i.g.," advises Sartin. "A visual inspection of coils will show when defrosting has been completed and when the unit should start. Then the cut-in setting can be raised or lowered, but it should be plus or minus not more than 2 p.s.i.g. from the original setting of 40 p.s.i.g."

SET NEW SWITCH AT 2-4 P.S.I.G. HIGHER

"Check the cut-out setting of the original controlling low pressure or dual pressure switch, and set the newly-installed switch to cut out at 2 to 4 p.s.i.g. higher pressure," Sartin says.

If the controlling switch is set to cut in at 26 p.s.i.g. and cut out at 7 p.s.i.g., the new low pressure control switch should be set to cut in at 40 p.s.i.g. and cut out at 9 to 11 p.s.i.g., he explains.

"Regardless of the setting, it is absolutely necessary that the new l.p. switch open its contacts first," Sartin cautions. "Otherwise, the unit would stop operating when the cut-out point of the controlling switch was reached, but the contacts would still be closed on the new l.p. switch."

As a result, the compressor would start again when the suction pressure rose to 26 p.s.i.g. (cut-in point of controlling switch) even though the time clock was on the defrost cycle.

With the additional l.p. switch

properly wired and adjusted, the defrost cycle of the time clock can be set for a longer "off" period, say 2 hours instead of 1½ hours.

The compressor will stop when the clock reaches the beginning of the defrost cycle, but will start again as soon as the suction pressure rises to meet the cut-in setting of the new l.p. switch.

At the expiration of the clock defrost cycle, the contacts in the clock will close and the operation of the system will be controlled by the controlling l.p. or dual pressure switch.

The contacts in the additional l.p. switch could be manually opened at this time without disturbing operation of the unit since this switch is wired in parallel with the clock.

Mueller Brass Names James D. MacFarland

PORT HURON, Mich.—Appointment of James D. MacFarland as sales representative has been announced by A. C. Dappert, vice president in charge of sales of Mueller Brass Co.



MacFarland has been assigned to the Washington, D. C. office. He will assist E. E. Sutter, district sales manager, in the sale of "Streamline" products for the plumbing, heating, refrigeration, and air conditioning industries as well as brass bronze and aluminum fabricated and mill products.

MacFarland was associated with Davison Chemical.

Broadway Opens New Service Plant

NEW YORK CITY—To meet the steadily-growing industrial needs of the Nassau-Suffolk area, Broadway Maintenance Corp. will open a new service plant at Hicksville, L. I., it was announced.

Included in the operations and services will be complete electrical contracting facilities, neon sign and fluorescent lighting repair and maintenance, and a complete air conditioning design, installation, and maintenance operation, it was reported.

The new combination warehouse, shops, and office building officially opened its doors on Dec. 8, and operates as a complete entity apart from the main plant and headquarters in Long Island City, the announcement concluded.

Imperial Brass Opens West Coast Warehouse

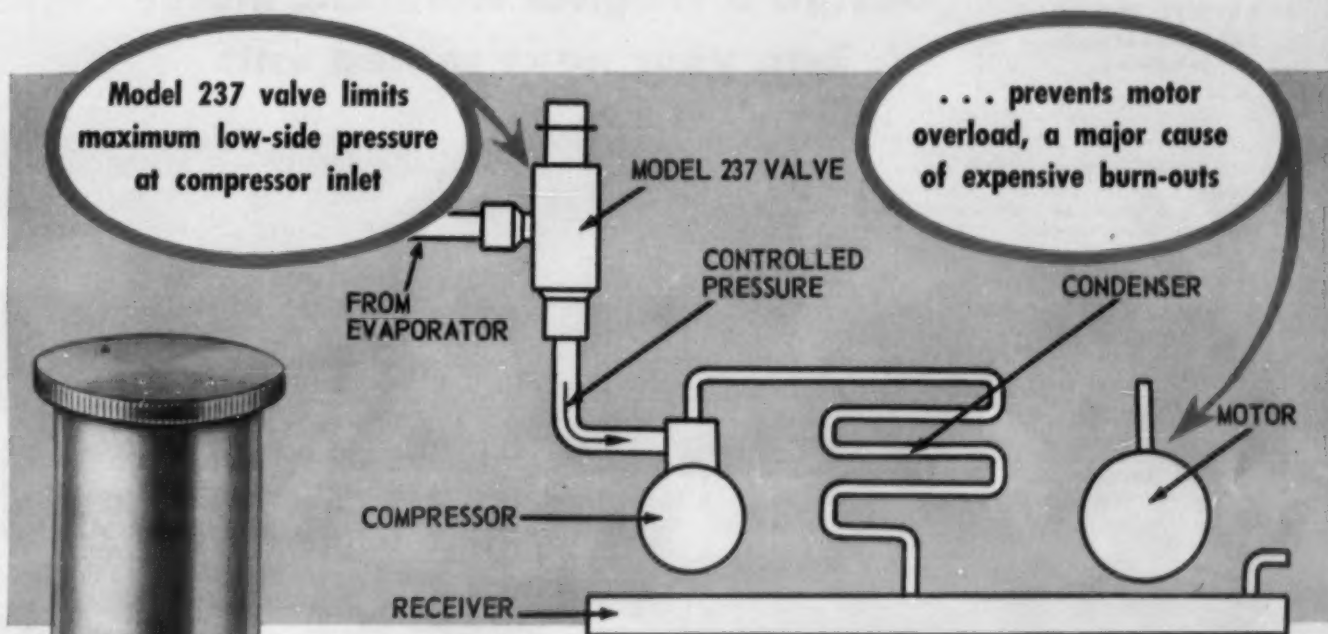
CHICAGO—Opening of a new sales office and warehouse in San Francisco to serve Imperial distributors, and the addition of new sales personnel, have been announced by The Imperial Brass Mfg. Co. here.

The new office and warehouse is located at 476 Golden Gate, San Francisco, and is designed to serve Imperial distributors in central and northern California and the Pacific Northwest.

Gordon J. Duerr, Imperial Western Div. sales manager, is in charge of the new office and warehouse. Representatives headquartering at the new office are Ralph Nelson and Robert McCormick.

Imperial continues to maintain its warehouse stocks and sales office in Los Angeles at 1341 S. Hope St.

Best overload protection a motor ever had!



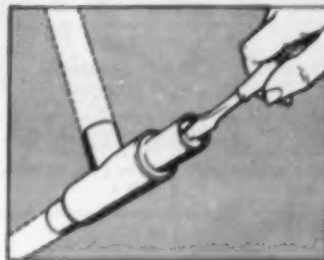
Yours from A-P..it's the Model 237 CRANKCASE PRESSURE REGULATING VALVE

By installing the Model 237, you directly eliminate a major cause of system breakdown — the overloaded motor. At conditions of overload, the valve modulates to prevent suction gas pressures at the compressor inlet from rising above the desirable maximum recommended for the condensing unit motor. When system overload condition has passed and normal evaporator pressures prevail, Model 237 assumes a wide-open position to avoid further restriction of refrigerant gas flow.

Make the Model 237 a standard-equipment installation. It's the proved way to safeguard the performance of your product or service!

For hot gas or electric defrost installations

- Two capacity ranges: 1.5 ton and 3 ton, F12
- Small and compact for limited space applications
- Flare or solder-type connections
- Soft solder and silver solder-type connections
- Non-chattering



TWO ADJUSTMENT RANGES — 0 to 40 lbs. gauge and 30 to 110 lbs. gauge. Convenient adjusting stem for setting to compressor manufacturer's recommendation.

For complete details write:

A-P CONTROLS CORPORATION

2460 N. 32nd Street, MILWAUKEE, Wisconsin
COOKSVILLE, Ontario NIJMEGEN, Holland
For Export: 13 E. 40th Street, New York, N. Y., U.S.A.



DEPENDABLE Controls
for Air • Liquids • Gases • Refrigerants

J&G Replaces K&M As Supply Outlet In Tulsa, Oklahoma

TULSA, Okla. — A newly-formed corporation under the name of J & G Supply Co. will continue the business now operated by the K & M Supply Co. at 202 E. First St. here after Jan. 16, C. G. Gardner, manager of Jones-Newby Supply Co. of Oklahoma City, announced recently.

The new corporation will have the same officers as the Jones-Newby Supply Co., but will be operated as an independent corporation with its own charter, Gardner said.

He declared that J & G will continue to operate in the same manner as K & M has in the past. D. G. Andrews, present manager of K & M will continue as manager of J & G.

Trane Engineering Bldg. To Show Air Conditioning Unit Operating

LA CROSSE, Wis. — Trane President D. C. Minard announced recently that bids would be taken by the company during early spring of 1956 for the construction of a 65,000-sq. ft., "L" shaped engineering building.

"The engineering building," Minard said, "is urgently needed to provide space for Trane's product and design departments which have outgrown their present quarters due to the increased activity of the company in this area of its operation."

The main floor of the structure will include space for the company's product engineering department, design engineering department, several conference rooms, reception area, a micro-film room, and blueprinting de-

partment.

A dining room with kitchen facilities to serve catered meals to 200 people, will be located in the basement. Areas in the basement have also been designated for a telephone exchange and duplicating equipment rooms.

The mechanical equipment room will have a showroom appearance and feature a full glass wall so that the Trane "Centra-Vac" (centrifugal refrigeration compressor manufactured by the company for big building air conditioning systems), which will supply chilled water for the engineering building's air conditioning system, can be viewed while in operation.

F. A. Fairbrother and George H. Miehl are architect and engineer for the job.

Soreng Appoints Neess To Sales Post

SCHILLER PARK, Ill.—Paul F. Neess has been appointed sales manager of heating and air conditioning controls for Soreng Products Corp. here, announced G. R. Calkins, vice president, director of sales recently.

He will be responsible for the development and promotion of a new and broader line of controls for heating and air conditioning in the domestic and commercial field.

Neess has been associated with Perfex Corp. as product manager of the Controls Div. and also manager of its Appliance Controls Div.

Prior to joining Soreng Products, he held a staff position with General Controls, Inc. of Glendale Calif., as manager of field engineering.

Square D To Operate Electric Controller As Separate Division

DETROIT—Square D Co. and Electric Controller & Mfg. Co. formally began operations Jan. 4 as a merged corporation.

Square D, as the surviving company, will operate Electric Controller as a separate division, and becomes one of the nation's largest manufacturers of electrical distribution and control equipment.

Concurrent with the merger, F. W. Magin has become chairman of Square D's board of directors and A. G. Patterson has been named president. Magin has been chief operating officer of Square D since 1933 and Patterson has served as president of Electric Controller since 1952.

In addition, Dr. John D. Leitch and Alvin C. Dyer, vice presidents and directors of Electric Controller, have been named to similar posts in the merged company.

Electric Controller recently completed a 340,000-sq. ft. plant in Cleveland, where it will remain as a Square D division. The company is a prominent producer of controllers and starters for electric motors; electro-magnets for lifting and other purposes; magnetic brakes, and a variety of related electrical devices.

The bulk of Electric Controller's products are for custom application in heavy industries, whereas Square D has been primarily a mass-production manufacturer of distribution and control devices for industrial purposes, and for commercial and residential use.

Amstan Opens Cleveland Air Conditioning Branch

PITTSBURGH—Amstan Supply Div., distributor of plumbing and heating equipment, has expanded its Cleveland operations by opening a local branch for the sole distribution of air heating and cooling equipment, R. F. Sells, president of the distributorship, announced recently.

The new branch at 18200 Brookpark Rd. becomes the second Amstan operation to be carried on here. It will be known as the Cleveland Air Conditioning Branch to differentiate it from the plumbing and heating branch at 1825 Lakeside Rd.

In addition to a complete line of air heating and cooling equipment manufactured by American-Standard Air Conditioning Div. at Elyria, Ohio, the new branch will also stock sheet metal goods, ductwork, rain goods, registers, and related products.

An outstanding feature of the new unit is its modern showroom with displays of winter and summer air conditioning equipment, it was noted.

L. L. Groff has been named manager of the Cleveland Air Conditioning Branch. He has been active in the heating and cooling industry for many years and is a member of the American Society of Heating & Air Conditioning Engineers.

Wagner®

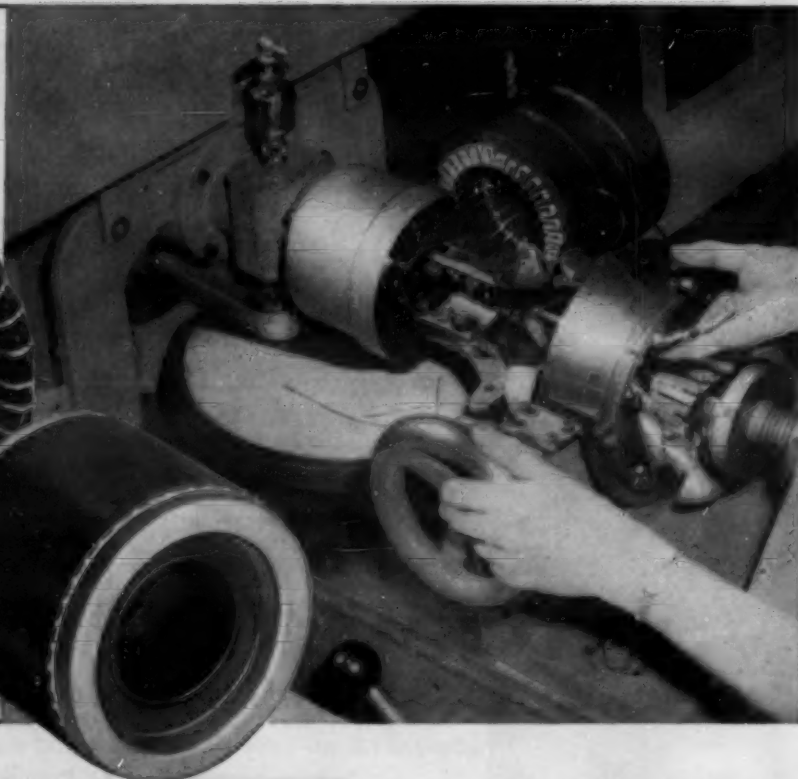
ELECTRIC MOTORS
... the choice of leaders
in industry

Design a Wagner Hermetic Motor into your next sealed unit

This stator winding machine, especially designed by Wagner engineers, is a part of the modern production facilities used for quantity production of Wagner Hermetic Motors.



POLYPHASE—1 to 10 hp, 3 phase, 60 cycle, 208, 220 or 440 v. Squirrel-Cage.



YOU'LL GET ... carefully built, thoroughly tested, performance-proved motors that you can seal for life!

Wagner hermetic motors, like all Wagner motors, are known for their ability to give years of trouble-free service. Wagner hermetics are built on modern production lines—with the newest, finest production tools available. Repetitive surge and dielectric tests are given to every Wagner hermetic motor stator. Every rotor that goes into a Wagner hermetic motor is given an individual speed test.

Such exacting manufacturing techniques and quality control enable us to provide you, the manufacturer, with hermetic motors that will give years and years of dependable service ... motors on which you can safely

stake the reputation of your product.

When your motor drives are to be hermetically sealed, it's to your advantage to specify Wagner for use on your equipment. Get the facts ... call the nearest of our 32 branch offices or write us.

POLYPHASE		SINGLE-PHASE	
TYPE	RATINGS	TYPE	RATINGS
NP, Squirrel-Cage	1 to 10 hp, 3 phase 60 cycle, 208, 220 or 440 v.	NB—Split-Phase	1/4 hp, 60 cycle, 115 v.
		NK—Capacitor-start induction run	1/4 to 1/2 hp, 60 cycle, 115 or 230 v.
		NY—Capacitor-start and run	1/2 to 5 hp, 60 cycle, 230 v.



SINGLE-PHASE
1/4 to 5 hp, 60 cycle, 115 or 230 v. Split-Phase. Capacitor-start induction run. Capacitor-start and run.



Wagner Electric Corporation
6441 Plymouth Ave., St. Louis 14, Mo., U.S.A.

BRANCHES AND DISTRIBUTORS IN ALL PRINCIPAL CITIES

ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL BRAKES • AUTOMOTIVE BRAKE SYSTEMS—AIR AND HYDRAULIC

For more information about products advertised on this page use Information Center, page 24.



“THE AIRTEMP STORY”



**An objective view of your future as a
dealer in air conditioning and heating**

THE FACTS BEHIND THE

AIRTEMP HELPS YOU GET BUSINESS— AIRTEMP HELPS YOU STAY IN BUSINESS

1. Powerful Advertising Support At National Level.

Airtemp's advertising program, unequalled in the industry, gives your product its first push. It pre-sells many of your customers to make your selling so much easier.

2. Sales-Producing Promotions at Local Level.

These are coordinated with national advertising to give your sales effort further impact—and targeted at special local markets to move more

products and increase your dollar volume.

3. Strong Distributor Backing All the Way.

The Airtemp distributor organization is a specially selected group—selected on the basis of experience, knowledge of air conditioning in all its phases, and ability to service any kind of dealer requirement.

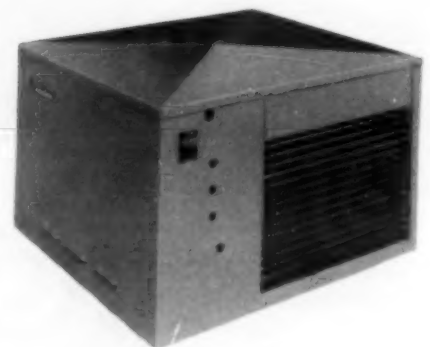
4. Sales Assistance When You Need It.

When you have a merchandising problem or a situation demanding an expert, the Airtemp distributor cooperating with a factory-trained sales specialist comes in to help you close the sale.

*And with your Airtemp
Franchise—the famous
Airtemp line of "Packaged"
Air Conditioning Systems
—the most complete line
in the industry!*



Model 1493 Evaporator Cooling Coil
on Model 4180 Hi-Boy Furnace



Model 1202-2 and 1203-1 Condensing Unit

**for solid yearound selling, Airtemp
for any type of business**

AIRTEMP FRANCHISE

Before you take on any franchise you should consider many things. One consideration, however, should come above all others—the *character* of the franchise.

To us, character means the manufacturer's . . . and distributor's . . . integrity, experience and assurance of continued help to the dealer partner.

Therefore, we of Airtemp urge you to carefully examine the following so that you can make the decision best suited to your interests.

5. Engineering Assistance When You Need It.

If you run into a unique air conditioning requirement or a special application, again you can depend on skilled Airtemp factory and distributor personnel to help you sell the job or get it done.

6. Financial Assistance When You Need It.

In matters of customer or dealer financing, Airtemp has a Financial Plan and experts to advise you.

7. Continuous Dealer Educational Program.

Airtemp factory and distributor specialists con-

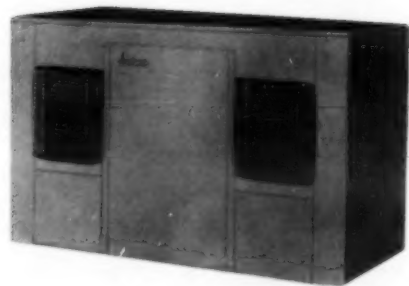
stantly keep you informed of new developments and new applications in today's rapidly changing air conditioning market.

8. Outstanding Consumer Preference.

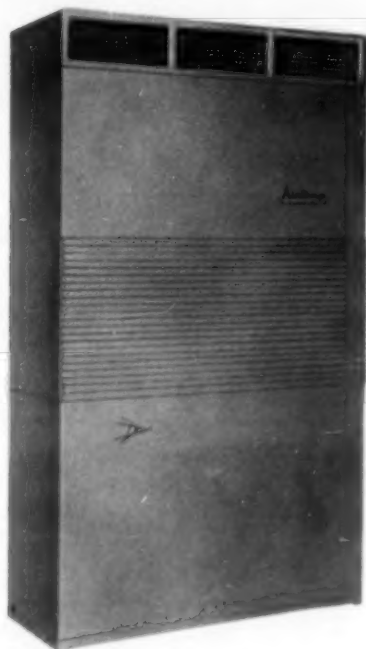
Millions of Americans drive a Chrysler-made car. Millions of others know the Chrysler genius for engineering excellence and leadership.

9. Leadership and Experience In Air Conditioning.

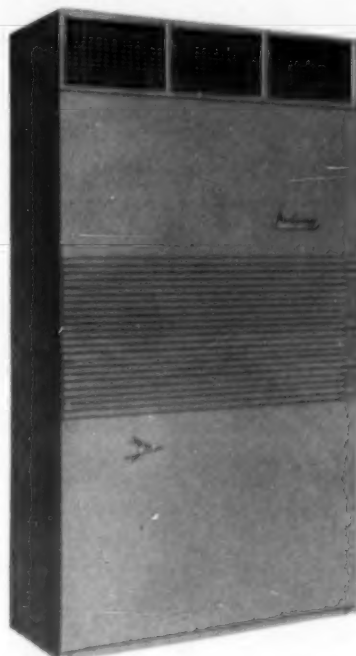
Leadership is both the inevitable reward for distinguished achievement and the logical outgrowth of greater experience.



Model 1205 Condensing Unit



Model 1005-2 "Packaged" Water-Cooled Air Conditioner. New '56 styling!



Model 1008-2 "Packaged" Water-Cooled Air Conditioner.



Model 1011-2 "Packaged" Water-Cooled Air Conditioner.

SIX OTHER WATER-COOLED MODELS IN 2, 3, 15, 20, 25 and 30 H. P.

gives you waterless and water-cooled air conditioning for every kind of business requirement!

1956—YEAR OF DECISION FOR THE AIR CONDITIONING DEALER—1956

The past few years have witnessed a tremendous growth in the development and expansion of air conditioning. Now, with complete public acceptance of air conditioning as a necessity, the market potential is virtually unlimited. Industry research experts forecast the sale of millions of units at billions of dollars.

What does this mean to you as an air conditioning dealer? It means doing business in a *growth market* as compared to a *saturation market*.

What will be the outcome? It can safely be predicted that the next few years will see an increasing number of new air conditioning manufacturers lured by the promise of rich rewards in a market which is *anything* but a saturation market.

The result will be an increasingly competitive situation in which many of these new lines will be withdrawn, leaving the dealer without the support of a strong line. Witness what has happened to many dealers in home appliances, automobiles, television and, more recently, room air conditioners.

Just what should you look for in an air conditioning line? Chief among these are a "sense of merchandising," solid national advertising schedules for every media, hard-hitting local and

off-season promotions, and specialized campaigns for specific businesses. And you also need a manufacturer with the know-how and experience to do these jobs effectively.

But all this is only the marketing side of the air conditioning business . . . a business which by its inherent nature is like no other. What else is needed?

Once again, in terms of the dealer, he has to have specialized help. Factory-trained men to help him on special engineering applications, men to guide his sales effort, financing aid when necessary to the sale. And experience, *again*, is needed to do these jobs effectively.

This is your *year of decision*, if you are to become a dealer in air conditioning. Select the manufacturer who can give you the finest and most complete line of air conditioning, the greatest number of specialized services, the most effective selling tools, and all the help you need when it is needed. Above all, choose an *experienced* manufacturer of air conditioning equipment—one whose *only* business is air conditioning—who, therefore, is in the best position to help you *get* business and can best help you to *stay* in business year after year.

FRANCHISE FOR GREATER PROFITS WITH —



**Your nearest Airtemp Distributor is listed below.
Call him for the most profitable future in Packaged Air Conditioning.**

ATLANTA REGION

Ramseur Equip. Co.
Greenville, S. C.
Southernair Co.
Durham, N. C.
Dealers Supply Co., Inc.
Atlanta, Ga.
Horne-Wilson, Inc.
Tampa, Florida
Horne-Wilson, Inc.
Orlando, Florida
Horne-Wilson, Inc.
Jacksonville, Florida
Horne-Wilson, Inc.
Tallahassee, Florida
Central Dist., Div. of Central
Air Conditioning & Htg., Inc.
Nashville, Tennessee
Southern Air Cond. Htg.
Dist., Inc.
Chattanooga, Tennessee
Air Conditioning Dist.
Miami, Florida

CHICAGO REGION

Frank J. Kersher Co.
Manitowoc, Wisconsin
James B. Clow & Sons
Chicago, Illinois
Conditioned Air, Inc.
South Bend, Indiana
Globe, Incorporated
Minneapolis, Minn.
Hardware Prod. Co.
Sterling, Illinois

DALLAS REGION

Royalair Dist.
Dallas, Texas
Dealers Supply Co.,
Div. of Temperature Control
Tulsa, Oklahoma

Air Accessories, Inc.
Ft. Worth, Texas
Low-Temp Dist., Inc.
San Antonio, Texas
Baker Eng. Company
Lubbock, Texas
Air Cond.,
Div. of United Electric Co.
Wichita Falls, Texas
Red River Dist.
Sherman, Texas
Comfort Dist.
Oklahoma City, Oklahoma
The Caperton Co.
Tyler, Texas
Airtex, Inc.
Houston, Texas

DAYTON REGION

Temperature Control, Inc.
Indianapolis, Indiana
General Air Supply Co.
Dayton, Ohio
Air Therm Supply Co.
Cleveland 12, Ohio
H & C Supply Co., Inc.
Akron, Ohio
The Palmer-Donavin Mfg. Co.
Columbus, Ohio
The Mutual Mfg. & Supply
Cincinnati 25, Ohio
Stratton & Terstegge Co.
Louisville, Kentucky
Banks-Miller Supply Co.
Huntington, West Virginia

DETROIT REGION

Kalamazoo Mech. Serv. Co.
Kalamazoo, Michigan
Arthur Boot Co.
Grand Rapids, Michigan

Hager-Fox Htg. & Ref. Co.
Lansing, Michigan
Hager-Cove Lumber Co.
Lansing, Michigan
Star Steel Supply Co.
Detroit 34, Michigan

NEW ORLEANS REGION

Steel City Supply Co., Inc.
Birmingham, Alabama
Ark-La-Tex
Monroe, Louisiana
Kremser Wholesale
Clarksdale, Miss.
Refrigeration Equip. Co.
Baton Rouge, La.
Kremser-Oliver Co., Inc.
Jackson, Mississippi

NEW YORK REGION

Cooling Prod. Dist., Inc.
Bronx, New York
Dornail Company, Inc.
Newark, New Jersey
The Eastern Company
Cambridge, Massachusetts
Fox Brothers Fuel Co., Inc.
Fair Lawn, New Jersey
Slye Supply, Inc.
Pittsfield, Massachusetts
Utica Oil Htg. Corp.
Utica, New York
Air Cooling Prod.,
Div. of Airconda
Air Conditioning Co., Inc.
New York, N. Y.
North Star Supply, Inc.
Buffalo, New York
A & M Distributors
Red Bank, New Jersey

Central Queens Elect.
Supply Corporation
Jamaica, New York
Standard Dist, Inc.
Hartford, Conn.
AHR, Incorporated
Rochester, New York

PHILADELPHIA REGION

Wilson Supply Co.
Washington, D. C.
Lincoln Sales Corp.
Baltimore 2, Maryland
Dorries Distributors
Wilmington, Delaware
York Radio & Ref. Parts
York, Pennsylvania
Proie Brothers, Inc.
Pittsburgh, Pennsylvania
Allentown Supply Corp.
Allentown, Pennsylvania
Colonial Sales Corp.
Norfolk, Virginia
Kingston Electric Co.
Kingston, Pennsylvania
Neyharts', Incorporated
Williamsport, Pennsylvania
S. S. Fretz, Jr., Inc.
Philadelphia, Pennsylvania
Southern Ref. Corp.
Roanoke, Virginia
Felheim Htg. & Roofing
Erie, Pennsylvania

ST. LOUIS REGION

E. E. Souther Iron Company
St. Louis, Missouri
Western Supply Company
Wichita, Kansas
Waldens', Inc.
Denver 11, Colorado

Truog-Nichols
Distributing Co.,
Div. of
Dan Truog & Clyde Nichols,
Inc.
Kansas City, Missouri
Ohio Valley Hardware Co., Inc.
Evansville, Indiana

A & T Distributors,
Div. of Air Temperature, Inc.
Memphis, Tennessee

555, Incorporated
Little Rock, Arkansas

Sidles Company
Des Moines, Iowa

Sidles Co.,
Air Conditioning Division
Omaha 2, Nebraska

Automatic Htg. &
Cooling Corp.
Sioux City, Iowa

Baker McClintic Company
Columbia, Missouri
Buddy Melnik
Wholesale Distributing Co.,
Div. of Tru Temp,
Incorporated
Decatur, Illinois

WEST COAST REGION

Ralph Dusenbery
Yuma, Arizona
Air Products,
Div. of Climate Control Co.
Phoenix, Arizona
Therm-O-Rite
Toronto, Ontario, Canada
Ashburn Supply Co.
Culver City, California
American Htg. Equip. Co.
Seattle 77, Washington

Buffalo To Add 3 Air Conditioned Buses This Year

BUFFALO — The Niagara Frontier Transit System will have at least three air conditioned buses on its routes next year, NFT President Roswell F. Thoma announced.

They will be part of the 60 new Mack buses ordered last July. About half of the buses have been delivered and are in service.

Thoma said the buses will be the first of their kind. Cost of the air conditioning installation and equipment is being shared by NFT and Mack because of the experimental nature of the project.

The air conditioned buses will be equipped with special windows, since safety regulations prohibit having locked or permanently closed windows on public service vehicles.

In order for the air conditioning to function properly, the windows of the bus must be closed, but can be opened in an emergency by pushing outward, Thoma said.

He said the idea of trying out air conditioning came to him while thinking about the terrific heat wave last summer.

"We are always trying to make our service as attractive as possible," he explained. "If this experiment works out satisfactorily, we will install air conditioning on all buses ordered in the future."

York Grants Veep Award To Company's Southwest District

YORK, Pa. — York Corp.'s Southwest District, with headquarters in Houston, Texas, received the Veep Award for "outstanding over-all performance during 1954-55" at ceremonies recently at the firm's home office here.

W. S. Miller, district manager-commercial accepted the award, a silver cup filled with champagne, from J. Keith Loudon, vice president and general manager, Commercial Div.

This award is not given to an individual, Loudon explained, but to all the people in the district—district office personnel, distributors, dealers, and salesmen all share in the honors.

Servel Appoints 2 New Air Conditioning Distributors

EVANSVILLE, Ind. — Beaulieu Air Conditioning & Heating Co., Lafayette, La., and The Mechanical Equipment Co., Mobile, Ala., have been appointed as distributors of Servel air conditioning products in their respective trading areas.

The announcements were made by A. J. DeFino, vice president and general manager of the air conditioning division of Servel, Inc.

Frank Beaulieu is owner of the Beaulieu Co.

Mechanical Equipment's officers are E. J. Vulevich, owner, and Gerald Leff, sales manager.

Air Conditioning Seen as Independents' Survival Weapon In Chain Store Battle

CHICAGO—Independent merchants are looking toward air conditioning as a necessary weapon in their battle for survival in what rapidly is becoming a "chain store age," according to J. W. Alsdorf, president of Mitchell Mfg. Co.

"This is the era where the customer demands comfort while shopping," he said, "and the retail chains realize that air conditioning is the most powerful current concept of comfort. It is high time the independent merchants realized this."

Statistics released by Mitchell, Div. of Cory Corp., indicate the growing market for air conditioning in commercial stores.

Alsdorf pointed out that in 1953 alone, the national chains

spent more than \$49 million on air conditioning, and that in that year, 35% of all chain stores built or remodeled were air conditioned. In 1954 this figure increased 10%, and in 1955 another 15%.

"The public no longer looks on air conditioned stores as novelties," he said. "Our studies show the public actually 'shops' for these stores and has come to regard air conditioning as one of the expected courtesies in a retail establishment."

Pointing to the growing demand for packaged air conditioners in stores, Alsdorf said sales of store units have jumped from 55,000 in 1952 to an estimated 150,000 store units sold last year. He predicted that an-

nual sales would reach 300,000 by 1965.

"There currently are 146,000 food stores equipped with air conditioning," he said, "and 260,000 taverns and restaurants have it. In addition, 39,000 general merchandise, 89,000 apparel, 47,000 drug and proprietary, and 42,000 furniture stores are air conditioned."

"The independent merchant who does not now think seriously about air conditioning may find himself far behind the times."

Alsdorf also said there are more than three million potential customers for commercial air conditioning including office buildings, hotels, and motels.

"In addition," he said, "in the United States there are 304,000 industrial plants which are not more than 1% air conditioned. This is a virtually untapped market."


Auto Air Conditioning Eases Picker Shortage

HOUSTON, Texas — There's nothing like air conditioning as a drawing card, unless it is combining air conditioning with another form of comfort or luxury.

Troubled by a shortage of cotton pickers for his farm at Alief—at the height of the cotton-picking season, W. Kendall Baker acted promptly to get his crop picked before the rains spoiled it.

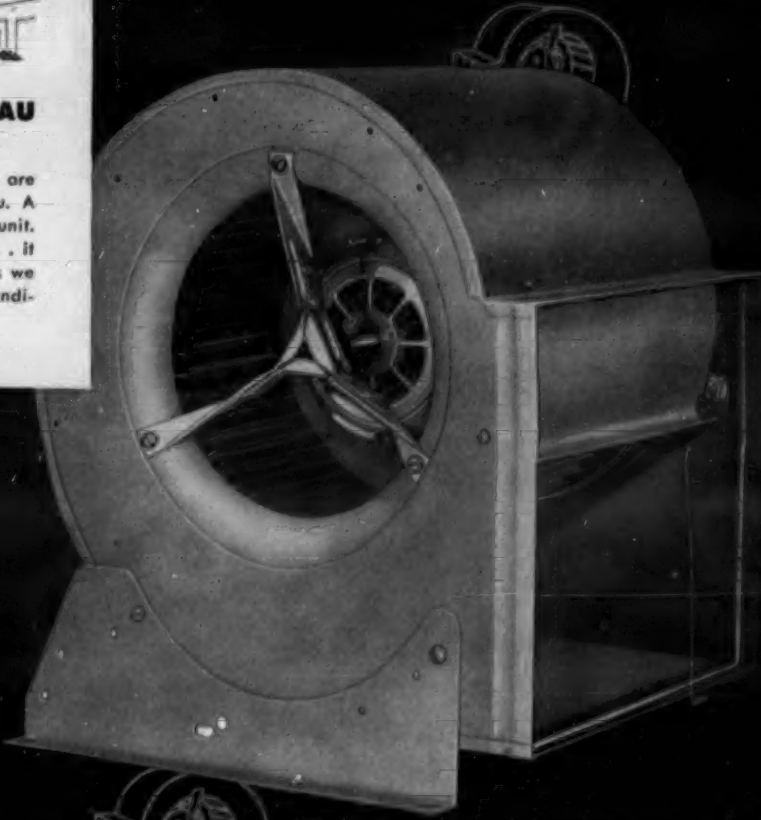
He sent his air conditioned Cadillac, driven by his chauffeur, to the offices of the Texas Employment Commission in Houston.

The chauffeur drove up to where cotton pickers were being loaded in trucks to go to all the cotton picking jobs, had no trouble in recruiting a Cadillac-full to pick Baker's cotton.



LEADERS RELY ON LAU
25 Years Building Better Blowers

When new developments in blowers are possible you'll see them FIRST at Lau. A case in point is the "ELECTRO-WHEEL" unit. The motor is new and revolutionary . . . it revolves on a stationary shaft . . . thus we overcome a multitude of frustrating handicaps present in a direct-drive blower.



FIRST IN THE INDUSTRY



THE LAU BLOWER COMPANY

2000 Home Avenue • DAYTON 7, OHIO

Other plants at Kitchener, Ont., Canada, and Azusa, California

*ELECTRO-WHEEL is the name of this new Lau direct-drive blower that will deliver more air with less power load than ever before, because it has unobstructed air inlets on both sides of the wheel. The new, compact motor, an integral part of the blower wheel center disc, revolves on a stationary shaft, rubber-encased on both ends. This means efficient elimination of noise and vibration. And two rigid tripod mountings have minimum interference to air flow . . . give greatest shipping strength. Five sizes: 9" and 10" wheels; air deliveries from 500 to 1500 cfm; 1/4 h.p. motor. Available with or without housing supports which may be mounted in pre-punched holes for any discharge angle. Write Lau, Dept. M for further data.

*Trade Mark



For more information about products advertised on this page use Information Center, page 24.

Good Accounting System Necessary for Business Success, NCRSA Hears

ATLANTIC CITY, N. J.—Records of assets and liabilities, profits and losses, and production cost records, all gathered as often as possible are the essentials of a good accounting system that is so necessary for the success of a business, according to S. G. Taylor, operator of a commercial distributorship in Des Moines, Iowa.

"By our work our customers shall know us; by our accounting system we shall know ourselves," Taylor told the National Commercial Refrigerator Sales Association at its ninth annual convention here.

Taylor, incidentally, was elected president of the group at this meeting.

"As with the mechanic, who is little better than the tools he works with, the successful job

that you and I do can be little better than the tools we employ. These tools are our physical plant, our service organization, our sales organization, our engineering ability, and our accounting system.

Accounting Used In Connection with Others

"We, the managers, must supervise the employment of all these tools, and the last of these, the accounting system is used in connection with each of the others, and thus becomes the most important," Taylor said.

"Many years ago an old boss of mine used to say that the prime object of business was to render a service; if you really rendered a service, profit would take care of itself. I would like

to add to this: providing you have a good accounting system. I think each of us should be enthusiastic about a good accounting system," he emphasized.

"Certainly management needs an inventory at all times of his assets and liabilities. Most of these are given us by a good accounting system. Physical plant, tools, materials on hand, and money in the bank, accounts and notes receivable, when teamed up with our skills, set out for us so crystal clear just what our capacity to perform might be.

Have Information as Often as Possible

"How often should we have this information? The best (Concluded on next page)

Fig. 1—Balance Sheet

ASSETS			
Current			
Cash in Bank			
Accounts Receivable			
Accounts Receivable, Employees			
Accounts Receivable, Miscellaneous			
Notes Receivable			
Bid Deposit			
Merchandise Inventory			
Total Current Assets			
Fixed			
Land			
Building			
Less: Reserve for Depreciation			
Auto & Trucks			
Less: Reserve for Depreciation			
Furniture & Fixtures			
Less: Reserve for Depreciation			
Total Fixed Assets			
Total Assets			
LIABILITIES			
Current			
Notes Payable—Bank			
Notes Payable—Others			
Notes Payable—S. G. Taylor			
Real Estate—S. G. Taylor			
Accounts Payable—Trade			
Customer Deposits			
Accrued Social Security Taxes			
Accrued Withholding Taxes			
Accrued Sales Tax			
Due Partners			
Total Current Liabilities			
Reserves			
Reserves for Warranty Service			
Reserve for Taxes			
Deferred Income			
Unearned Finance			
Capital			
Taylor Refrigerator Co.			
Profit or Loss to date			
Total Liabilities & Capital			

Fig. 2—Profit and Loss Statement

SALES & COST OF SALES				
Equipment	Sales	Cost	Gross Profit	%
New Refrigerators				
Refrigeration				
Counter Equipment				
Butcher Supplies				
Used Equipment				
Manufacturing				
Total Equipment				
Service				
Sales				
Engineer Service				
Service Parts				
Mileage, Meals, Hotel, Misc.				
Cost of Sales				
Service Salaries				
Outside Installation Expense				
Service Parts				
Auto & Truck Expense				
Total Service				
Total Sales				
Cost of Sales				
Gross Profit				
Selling Salaries & Bonuses				
Commissions Paid				
Advertising				
Traveling Expense				
Total Selling Expense				
Management Salaries				
Office Salaries				
Gas, Light, Heat, Water				
Depreciation				
Office Supplies & Printing				
Postage				
Bad Debts				
Telephone & Telegraph				
Insurance—General				
Taxes, State & Local				
Interest Expense				
Janitor Service				
Laundry Expense				
Miscellaneous Expense				
Discount				
Total General Expense				
Total Operating Expense				
Net Profit on Operations				
Add: Earned Finance				
Add: Recovery of Bad Debts				
Add: Appreciation on Cars				
Less: Collection Expense				

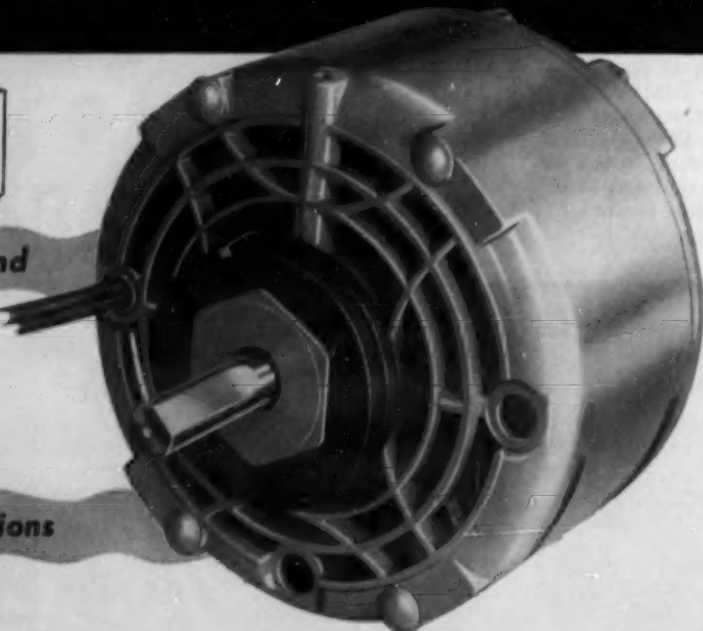
Super SHADED POLE MOTOR with ALL THE GOOD FEATURES



for air conditioning and

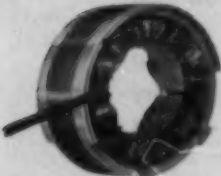


air moving applications



"AL-SPUN" ALUMINUM ROTOR CAGE

Heat-treated for lowest rotor losses. Integral cooling fan and vented core. Dynamically balanced.



"UNI-SPUN" STATOR FRAME

Anchored laminations, ample back iron, strong pole tips mean core rigidity, better heat dissipation, quiet operation.

You will boost sales by teaming your product with Lamb Electric Super Shaded Pole Motors. They will give your product the motor advantages of long life, quiet operation, high operating efficiency, and lasting good appearance.

Behind Lamb Electric Super Shaded Pole Motors is our 40 years' experience working with manufacturers of household appliances, such as food mixers, sewing machines, floor polishers and vacuum cleaners . . . experience that has resulted in these 10 features:

- "UNI-SPUN" STATOR FRAME for maximum rigidity
- FORMVAR INSULATED WIRE WINDINGS for high strength and insulation resistance
- "AL-SPUN" ALUMINUM ROTOR CAGE for maximum conductivity
- DIE-CAST END FRAMES . . . sturdy, lightweight, corrosion-resistant
- BEARINGS widely spaced, amply dimensioned
- AMPLE OIL RESERVOIR . . . positive oil circulation
- SHAFT precision ground to controlled surface finish
- MOUNTING absorbs vibration
- ADVANCED DESIGN, quality materials, and up-to-date manufacturing methods
- FINISH . . . moisture and abrasion-resistant

THE LAMB ELECTRIC COMPANY • KENT, OHIO

In Canada: Lamb Electric — Division of Sangamo Company Ltd. — Leaside, Ontario

Lamb Electric

SPECIAL APPLICATION FRACTIONAL HORSEPOWER MOTORS

Accounting--

(Concluded from preceding page)

answer to this is as often as possible. We have this information monthly at our place and have it with reasonable accuracy. The greatest difficulty in completing the monthly balance sheet and profit and loss statement is the matter of inventory.

"For the most of us in our business, this is not as difficult as with many other businesses, because most of our inventory dollars are in items low in number and high in value. For those classifications of items high in number and low in value we use the percentage method of inventory, so our monthly inventories are a combination of actual and percentage inventories, reconciled annually to an actual inventory.

"The other problem is producing an accurate monthly balance sheet and profit and loss sheet is 'Work In Progress' over the end of the month. The inventory of 'Work In Progress' is kept on a progress report listing labor and material at cost until date of invoice.

"Thus our monthly inventory becomes a total of actual inventory, percentage inventory, and work in progress, not invoiced. With this our monthly balance sheet is easily prepared and takes the following form. (See Fig. 1.) We have these forms mimeographed so that it is only necessary to fill them in each month.

Balance Sheets Important To Management Direction

"The Balance Sheet and its related reports becomes an important factor in giving management direction as to where its activities and energies are most needed. Accounts Receivable should be aged. Each month we prepare a list from which special attention can be given to past due receivables.

"Likewise we prepare a similar list showing condition of all notes receivable, and once each month, we work on delinquencies. If you are not aging your accounts each month you should do so. This gives you the best picture of the value of your Accounts Receivable. The value of your credit dollar depreciates as it ages," emphasized Taylor.

"We believe that you do not build up a sound business with past due customers. A customer who pays builds up his own ego and a customer who does not pay hates to come in contact with the people to whom he is indebted.

"We lay down some fundamental rules. In the first place, past due accounts, except in special cases, should be followed every 10 days for a period not to exceed 90 days, when they should be placed for collection. If you have more than 10% of the total of a month's business past due then, in our judgment, you should put on a drive to reduce your past dues to this amount.

Somebody Will Lose on Accounts Receivable

"Somebody is going to lose a lot of money during the coming year on accounts receivable. As a whole the overhead of NCRSA members is such that any con-

siderable reduction in volume might mean operating at a deficit," Taylor said.

"When a member operates at a deficit for any considerable length of time, he is soon living on the suppliers' money. There is no problem that needs attention more today than to keep your accounts receivable in a current position.

"Comparing the balance sheet with that of previous months makes us immediately note the changes that have taken place in the various asset and liability accounts. For example, a monthly comparison may show that our cash position is down. Is this the result of selling too much on deferred payments instead of on short terms? Are we neglecting our collections? Is our inventory getting too big?

"Perhaps additional working capital is needed in the business. Maybe this can be explained by a big job in progress, or, maybe

we need a little better inventory control," he suggested.

"Comparing our reports with industry averages also has its advantages. If you don't study reports in comparison with the annual all-industry averages shown in the report prepared annually by our own Miss Lawton and the staff of Fernley and Fernley, you are missing the boat, we think.

Classes of Items Sold

"1. Refrigerators, 2. Refrigerating machinery, 3. Counter equipment, 4. Butcher supplies, 5. Used equipment, 6. Factory items, 7. Service and service parts.

"Each of these classifications (see Fig. 2) is individually accounted for in our records. This means that each individual purchase and each sale must be broken down into its departmental components.

"If you do not do this, it may appear to be a stupendous job.

It really isn't, for using standard columnized sheets it even simplifies the keeping of books in balance. With page by page cross checks, any errors become immediately evident.

"Purchase invoices usually fall into only one or two classifications, but sales may fall into all seven. So as to make the system really informative the breakdown must be done with skill and accuracy. Possibly this has been done at the time of sale, in cases where the sale is on an item by item basis with the customer.

"When installed or lump sum contract prices are used we never compromise our service and parts department. Their share of the sale is exactly what it would have been had it been a service job on time and material, and not associated with the fixture sale.

"In this manner the service department can have no alibi if it does not operate profitably,

and sound and realistic conclusions can be arrived at on its operation and efficiency.

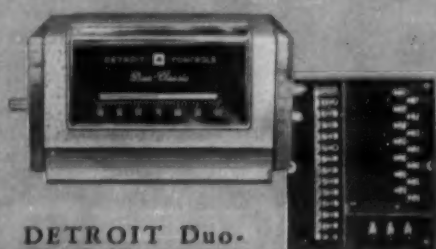
"I believe the departmental breakdown can certainly properly evaluate where we can most profitably direct our energies for the greatest service and the greatest profit. We have come to the conclusion that it is not the best business to get all our eggs in one basket.

"Before closing I want to tell you about what I consider our greatest weakness, and that is our cost accounting. We build coolers and shelving and do all the things associated with a food store that can be done in a wood working shop.

"If this portion of our business could be operated by finger tip control and I could retain all the essential data in my mind, then I could observe undesirable developments first hand. However, I must delegate this authority and some standard accounting procedure is needed.

Your Best Full-Line Source For Every Refrigeration Job

DUO-CLASSIC THERMOSTATS



DETROIT Duo-Classic Thermostats and the Universal (self-powered) Control Panel for Summer-Winter air conditioning. Simplified installation and operation!

EXPANSION VALVES



A broad line of valves with capacities to 25 tons F-12 and 40 tons F-22.

SOLENOID VALVES



A broad line of valves with capacities to 50 tons F-12 and 60 tons F-22.

Special purpose miniature solenoid valves for any application.

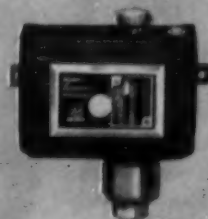
DETROIT CONTROLS

DETROIT SELECTAFLOW CONTROL



Thermostatic selector valve for Summer-Winter air conditioning systems using hot and cold water as the heat transfer medium in a single supply and return line. Completely automatic and self contained.

AUTOMATIC CONTROLS



A wide range of automatic controls for pressure, temperature, dual pressure, and sequencing applications.

AUTOMOTIVE AIR CONDITIONING CONTROLS



Combination bypass and suction valve with operating cam. These valves are engineered to meet high performance requirements.

CRANKCASE PRESSURE REGULATOR



(Hold-back Valve)

Get the COMPLETE Picture . . .
Use the COMPLETE Line . . .

See Your DETROIT CONTROLS Wholesaler
. . . or write for condensed Catalog 200-D

DETROIT CONTROLS CORPORATION
5900 TRUMBULL AVE. • DETROIT 8, MICHIGAN
Division of AMERICAN-Standard



Representatives in Principal Cities • Canadian Representatives:
RAILWAY AND ENGINEERING SPECIALTIES, LTD.,
Montreal, Toronto, Winnipeg.



AUTOMATIC CONTROLS for REFRIGERATION

AIR CONDITIONING • DOMESTIC HEATING • AVIATION • TRANSPORTATION • HOME APPLIANCES • INDUSTRIAL USES

For more information about products advertised on this page use Information Center, page 24.

American Blower Offers Industrial Axial Fans

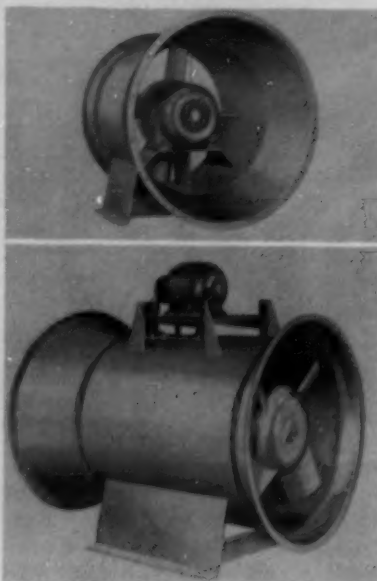
—KEY NO. F-130—

DETROIT—A line of axial fans with straight-line air flow for use in industrial ventilation, process air supply, and process air recirculation are now available, American Blower Corp. here announced recently.

Series 203 fans have cylindrical casings, allowing installation in ducts requiring a minimum of space. They feature universal mounting, and low installation cost, the firm states.

Integral support legs can be provided for ceiling, wall, or floor mounting for either vertical or horizontal air flow. When ducts are reinforced, the fan can be supported directly by duct connections, the manufacturer claims.

The "Tubeaxial" design gives a wide range of volume at medium pressures, it was reported. Air re-entry losses are reduced by using a large diameter hub and die formed blades for uniform velocity hub to tip. Discharge from this



fan follows a spiral which straightens out at moderate pressures in a short distance. Designed for a wide range of

volumes and pressures, the Vaneaxial fan has stationary directional guide vanes on the discharge side to reduce turbulence and improve pressure characteristics. These vanes transform spiral air flow into straight-line flow for smoother, quieter operation, the manufacturer declared.

V-belt drive type Vaneaxial fan has externally mounted motor with belts protected from the air stream by a twin tunnel guard. This permits using the fan to handle lightly contaminated air up to 350° F. Applications are fume exhaust and cooling towers. Series 203 fans are also available as direct-drive units, the company continued.

Direct-drive Tubeaxial fans come in 12 sizes having free deliveries up to 68,000 c.f.m. for use with static pressures up to 2½ in. The 12 direct-drive Vaneaxial sizes produce free deliveries to 58,500 c.f.m. at static pressures to 2½ in. V-belt drive Vaneaxial fans in 12 sizes provide up to 51,000 c.f.m. free delivery with static pressure to 3½ in.

Fenway Introduces Portable Cutting Tool

—KEY NO. F-131—

PHILADELPHIA—Recently introduced by Fenway Machine Co. here was a 13-lb. portable electric cutting tool, the manufacturer announced.

Called the "Nibbler," model HN is a heavy-duty precision tool able to handle cutting of stainless steel of all types up to 10 gauge, milder steels, and non-ferrous metals to 8 gauge, the firm claims.

The tool can be taken directly to any job, is maneuverable, cuts without distortion or burring of metal, the company said. The Nibbler will follow patterns or templates, cutting from any angle. It will also cut contoured or corrugated stock with a minimum radius of 6 in., the manufacturer continued.

Cutting action is provided by a high-speed, tool-steel punch and die which takes a ¼-in. slug of metal with each stroke. Speed at full load is 600 strokes per minute. Punch and die are removable for



resharpening or replacement, the company stated.

A universal type motor, approximately 1 hp., with a 3-wire, 9-ft. rubber cord is provided. A ground safe fuse cap and fuse is available as optional equipment for automatic protection against overheating, punch and die being too dull, forcing out action, or overload of heavier gauge metal, the report added.

Marsh Develops Maximum Pressure Gauge

—KEY NO. F-132—

SKOKIE, Ill.—A new "Service-man" maximum pressure gauge has been developed by Jas. P. Marsh Corp. here.

This new gauge is designed to relieve the service-man of constant gauge watching and to give visual proof of maximum pressure reached over any given period of time, according to the company.

"By means of an ingenious check valve, the pressure applied is trapped inside the bourdon tube and the indicating hand is stopped on the dial at the point of maximum pressure," it was explained

in the manufacturer's announcement.

"The pointer may be returned to zero by pressing the handy pushbutton on the side of the gauge socket—releasing the pressure."

"Gauge is standard with polished brass case and ring, glass crystal, 2½-in. dial, ½-in. male bottom connection and Marsh 'Recalibrator.'"

"Standard dial range is 0-400 p.s.i.," it was stated.

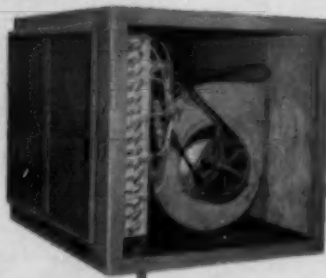
"The gauge will prove valuable in checking commercial cold boxes, auto air conditioning systems, balancing refrigeration systems, and in checking industrial processes and systems wherever maximum pressures are the important factors."



2-3-5-8-10 TON WATERLESS UNITS New air cooled units, easy to install, need no plumbing



When water is short, impure, costly — or where sewer tax is a problem — you can handle the job easily and economically with a Typhoon waterless air-cooled condenser. Units are easy to install and require little or no maintenance... deliver full capacity in hottest weather... give you a powerful selling plus! Round out your line with Typhoon waterless air conditioners—full range of sizes up to the exclusive 10 ton unit.



Superior Typhoon Engineering:

Centrifugal blower eliminates wind resistance factor, overloading of fan motor... adaptable to duct work.

Bigger condensing surface—more cooling capacity with less electrical input.

Self-contained or remote installation—for most advantageous positioning.

Non-stop performance even in hottest weather because compressor is never over-loaded.

Quiet—slow speed blower with belt-driven, ball-bearing drive cuts noise level.

Weatherproof design—all components housed inside cabinet for outdoor installation by refrigeration contractor.

TYPHOON

Specialists in Air Conditioning Since 1909

Typhoon Air Conditioning Co., Inc.
505 Carroll St., Brooklyn 15, N. Y.

I'd like to know more about selling Typhoon Waterless units.
Send me Bulletin A-8.

Name _____

Address _____

City _____

Zone _____ State _____

Information Center

For more information on What's New products, current literature and catalogs available, equipment advertised in AIR CONDITIONING & REFRIGERATION NEWS use Key Numbers where designated or specify products advertised and we'll see that you receive this information promptly.

Products Advertised

(list name, page, and issue date)

.....
.....
.....
.....
.....
.....

WHAT'S NEW OR CURRENT LITERATURE AVAILABLE

Key No.	Key No.
Key No.	Key No.
Key No.	Key No.
Key No.	Key No.
Key No.	Key No.
Key No.	Key No.

(PLEASE PRINT PLAINLY)

Name Title

Company

Street

City..... Zone..... State.....

Type of Business

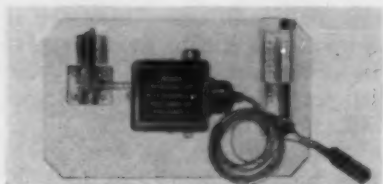
MAIL THIS FORM TO

AIR CONDITIONING & REFRIGERATION NEWS

Readers Service Dept.

450 W. FORT ST.

DETROIT 26, MICHIGAN



Temperature Controlled Locking Device Offered

—KEY NO. F-133—

INDIANAPOLIS—A new temperature controlled locking device that aids in quality control of aluminum rivets has been announced by the Webber Engineering Corp. here. The device locks when temperature within cold chamber rises above pre-set level.

Aluminum rivets must be stored at -30° F. temperature after annealing to preserve softened condition, to prevent splitting, and breaking when pressure is applied, Webber explained.

The locking unit, a non-electrical, thermal controlled device automatically locks the freezer lid to prevent use of rivets if the temperature has risen above a pre-set critical level, he said.

Unit remains locked even if temperature is lowered to normal correct operating temperature. Key retained by supervisory personnel must be inserted in lock and turned to release slidebolt and open lid.

Thus, materials can neither be placed in or removed from the freezer if the specified temperature limitation within the storage chamber has been breached, Webber explained.

Units have other applications where temperature variances must be kept within a given range. Locking device can be pre-set to operate at any temperatures from 20° F. to -50° F.



SIGHT GLASSES for Air Conditioner Refrigerant Systems

Quick visual checks on refrigerant can be made with Pyrex sight glass installed on the liquid line. Shows under or over charging, speeds servicing. Write Glass Division.

SWIFT
Lubricator Company, Inc.
1 Glass St., Elmira, N.Y.



LEFT: Bottle model BR-HC "Hot 'n Cold" water cooler is fitted with matching cup and beverage dispensers with refrigerated compartment.



RIGHT: Pressure model 13P-HC "Hot 'n Cold" water cooler is the Oasis unit fitted with matching cup and beverage dispensers.

Ebco Adds 'Hot 'N Cold' Bottle Water Cooler

—KEY NO. F-134—

COLUMBUS, Ohio—A bottle drinking water cooler with refrigerated compartment has been added to the newly styled "Constellation Series" of water coolers currently being introduced to the trade by Ebco Mfg. Co. here.

Refrigerated compartment in the new cooler is big enough to keep bottled drinks, packed lunches, or pharmaceuticals, the company said, and also will make and keep two trays of ice cubes.

Like all other models of the "Hot 'n Cold" coolers, this new bottle type may be equipped with matching cup and beverage dispensers at slight additional charge.

New styling for the line includes a new panel motif down the sides of the coolers and a newly developed color tone called "Desert Dawn." The color, the company

Pressure models in the line are crowned with a stainless steel top redesigned to facilitate speedier water removal. The top is deeper, diagonally designed, and divided. Cooling capacities of several

models have been greatly increased, the manufacturer declared, in some cases as much as 40%. This is attributed both to increased horsepower and to increased efficiency.

The "Oasis" Hot 'n Cold models, introduced a year ago, deliver hot as well as cold water. To help promote this type of cooler, Ebco has arranged to supply customers with a wide array of instant beverages packaged in individual service containers.

The list of available beverages includes coffee, chocolate, beef broth, chicken broth, and vegetable broth. Also available are Pream, sugar, and other supplies. These may be ordered through Oasis distributors or directly from the factory.

The Constellation Series includes hand or foot-operated models in 2 to 35-gal. capacities, standard or Hot 'n Cold, pressure or bottle, stainless steel, heavy duty, explosion-proof, air-sealed industrial, with refrigerated compartments, cafeteria, and juvenile types.

Curtis Introduces Colored Packaged Units

—KEY NO. F-135—

ATLANTIC CITY, N. J.—New packaged air conditioning units for commercial and residential use in pastel color combinations were introduced at the 9th Exposition of the Air Conditioning & Refrigeration Industry here by the Refrigeration Div. of Curtis Mfg. Co., St. Louis.

The units were enthusiastically acclaimed by dealers

from all over the country, the company reported.

"In designing these new units, Curtis is following the trend to use in pastel color combinations products," it was noted. "Color is fast becoming a dominant factor in America's modern living in the office as well as the home."

The Curtis units come in combinations of "Dusty Pink," "French Gray," "Firmist," "Colony Blue," "Sandalwood," and "Pottery Blue." The user may combine any two of the colors to blend attractively with any decor.

The packaged units are made in capacities from 3 through 20 tons.

Industrial Mfg. Offers Chilling Room Unit



—KEY NO. F-136—

CHICAGO—A unit for chilling air, comprising cooling coil, housing, fan, motor, and drive to deliver a large volume of refrigerated air and distribute it evenly throughout the space to be refrigerated was announced here recently by Industrial Mfg. & Engineering Co.

Called "Chilljet," the unit can be used in chilling rooms of meat packing plants where beef, pork, veal, lamb, bacon, ham, sausages, and poultry are to be cooled rapidly, the manufacturer declared.

Incoming temperatures are brought down to approximately 40° by the unit which has a capacity of 4 tons of refrigeration and delivers 3,500 c.f.m., it was stated.

further stated.

Designed to fit between meat rails and occupy space near the ceiling, Chilljet has a 1-hp. motor, and a 16-in. diameter double width, double inlet wheel which turns at approximately 600 r.p.m., the company emphasized.

Chilljet has a double drip pan, one being tightly sealed to the other. Between these is sealed 1-in. of cork insulation. There are removable side panels, held by four thumb screws, which permit access to the interior for cleaning or inspection, the firm said.

A fully flooded coil is included with built-in surge drum and either a float valve or a liquid level control installed. The coil can also be furnished arranged for thermal valve operation or for liquid recirculation, the manufacturer added.

An ample sized plenum chamber (air distribution space) is provided to properly handle the increased air volume, the company

NEW

Anemotherm Air Meter

gives you all vital readings with

P U S H B U T T O N

ease



Pays for itself through time saved on only one major job

The Model 60 Anemotherm Air Meter, developed by the Anemostat Corporation of America, gives you—in one convenient instrument—a simple, rapid method of balancing and checking any air system. It puts at your fingertips, by means of color-coded pushbuttons—

Air Velocity

Measures air velocities from 10 to 8,000 fpm, in increments as small as 5 fpm—a wider velocity range than ever offered before. It is essentially non-directional.

Air Temperature

Provides rapid-response measurement of temperatures from 0 to 255F. Temperatures can be read with an accuracy of one-half of one degree.

Static Pressure

Measures static pressures directly in terms of inches of water, from 0" to 10" wg. positive or negative, with a sensitivity of better than .05" at lower range.

The new Anemotherm Air Meter saves time and money. Write for Bulletin 55 giving all essential data.

AG 1000

ANEMOSTAT CORPORATION OF AMERICA
10 EAST 39th STREET, NEW YORK 16, N. Y.
MANUFACTURERS OF
ANEMOSTAT DRAFTLESS Aspirating AIR DIFFUSERS

6 BIG REASONS WHY...



Gloekler MEANS BUSINESS

- ★ **EXPERIENCE:** Gloekler has been designing and manufacturing commercial refrigerators for more than 50 years.
- ★ **QUALITY:** Only materials and workmanship that assure maximum performance are used in our products.
- ★ **DESIGN:** Both standard and custom designs are available—offer every important advantage to users.
- ★ **PERFORMANCE:** We provide written assurance of faithful performance and economical maintenance of each unit.
- ★ **PRICING:** Experience and modern production methods allow highest quality standards at competitive prices.
- ★ **PROFIT:** Dealers are assured of full markups and additional potential profit from customers through sale of add-on features.

WALK-IN & REACH-IN REFRIGERATORS
STANDARD AND CUSTOM DESIGNS
FOR EVERY COMMERCIAL and INSTITUTIONAL USE

GLOEKLER REFRIGERATOR CO.
ERIE, PENNSYLVANIA

For more information about products advertised on this page use Information Center, page 24.



FIG. 1—There are 7,000,000 homes in this country with gravity furnaces which are prospects for residential air conditioning.



FIG. 2—By removing the gravity furnace, modernizing ductwork, and installing a year-round unit, the homeowner not only gets air conditioning but an additional room.

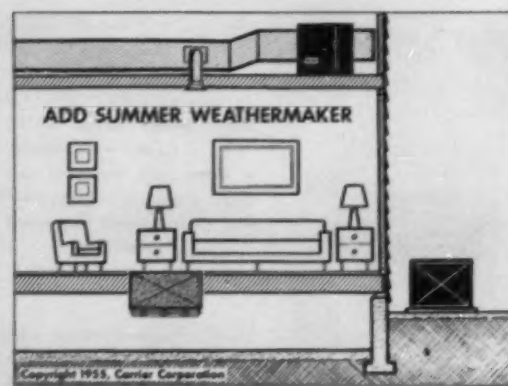


FIG. 3—A summer unit and minimum cost duct system can be installed in attic or basement to provide air conditioning for the many homes equipped with floor furnaces or wet heat. Remote refrigeration unit is located in yard.

Water Shortage Cited as Aiding Trend to Air-Cooled Residential Air Conditioning

DETROIT—Over 65% of the residential air conditioning systems being installed today are air-cooled units "and the trend is still growing," according to George F. Robinson, assistant sales manager for residential air conditioning, Carrier Corp.

"Air-cooled condensers are desirable for several reasons," Robinson told the Detroit section, American Society of Refrigerating engineers.

"When the water distribution and sewage disposal systems for the metropolitan areas were laid out 25 to 50 years ago, the forefathers did not realize the rapid growth of the suburban areas.

"Then too, large areas in the United States are unfortunately not blessed with copious supplies of water and, therefore, the use of this water through an air conditioning system and wasting it through the sewer just simply cannot be tolerated.

"Just five short years ago there were about a handful of communities in the United States which restricted the use of water for air conditioning. Today there are thousands.

"These restrictions, be they legal, unavailability, or the result of high usage cost, have caused a switch to the use of such water-saving devices as

cooling towers, spray ponds, evaporative condensers, and air-cooled condensers. Originally, the cooling tower was the most popular but the trend has tangented itself in the last two years to air-cooled units."

On an economic basis, according to Robinson, air-cooled condensers compare favorably with forced draft cooling towers.

"They require much less maintenance than do towers, and an air-cooled condenser on a hermetic refrigeration cycle does not need to be pumped down in the winter time or started up in the summer, thus permitting the homeowner practically to maintain his own system.

Maintenance Costs Are Vital to Home Units

"Maintenance costs are a vital factor in any residential air conditioning system. Mr. Homeowner cannot afford the maintenance cost the storeowner can.

"Because of the rapid growth of today's suburban area, even if water is available and cheap, the disposal of it sometimes is quite a problem. Sewers may be in but the tax on using them makes it uneconomical to use water-cooled units or perhaps there are no sewers at all. In these cases, septic tanks are employed and the individual who ties a water-cooled air conditioning unit to one of these is asking for trouble.

"Using waste water to sprinkle the lawn may sound good but we advise against it.

"When you consider that the average 2-ton unit uses approximately 2 gals. of water per minute, 120 gals. per hour, 2,880 gals. per day, 19,160 gals. per week, and approximately 250,000 gals. per season, you're talking of very large quantities of water and it's only the exceptional soil which has a percolation rate sufficient to absorb this quantity of water.

"Where water is available but sewage restrictions exist or sewers themselves do not exist, our suggestion is stay away from water-cooled units entirely and go to one of the water-saving devices available today. Air cooled would be our preference," he declared.

Other utility problems were also touched upon by Robinson.

"Both the electric utilities and gas utilities in America have been surprised at the rapid advance of air conditioning loads, and in a number of places the

peak summer demand now exceeds the winter demand," he said. "This is particularly true with electricity.

"The ideal thing for a public utility is to have a constant load and that is what is constantly being striven for. This is the fundamental reason why the heat pump looks so good to the electric utility and why the absorption refrigeration unit appeals to the gas company.

"In both cases, the summer demand almost exactly equals the winter demand and, therefore, they both visualize the residential market as being one wherein they can balance their loads, thus obtaining full use of their distribution facilities. We are quite certain that the electric utilities and the gas utilities will be able to supply their services along with the growth of residential air conditioning and we do not believe an insoluble problem will result.

"However, a great deal of co-operation must take place between the manufacturers, the distributors, and the installers of this equipment to make certain that the consumer is satisfactorily taken care of."

In discussing other problems of residential air conditioning, Robinson traced its development from the first Carrier installation some 40 years ago to the "marriage at the factory level" of a gas-fired duct heater and self-contained air conditioner in 1947.

"A number of things were learned. Basically, it was found that the old standards of commercial applications could no longer apply, for space was at an extreme premium.

"The second thing learned was that the old rule of thumb of 10% of the cost of the house for a heating system alone did not apply, and that if air conditioning were to be sold, it would have to come within this same price bracket. Therefore, new techniques in equipment development had to come.

"All of these items were incidental, however, to the first forward step advancing residential air conditioning in the domestic field. This step had to do with an engineering approach to proper estimation of the cooling load requirements for a house.

"Up until 1947 all selection of equipment had been based on commercial standards. When a dealer installed a unit and did not estimate the job, he was almost certain to pick a unit oversized just to be on the safe

"Through hundreds of field checks on actual installations, it became apparent that tremendous strides could be made by

the air conditioning industry if a method could be found wherein an air conditioning unit could be properly selected for a specific residence.

"For those of you who are in the heating field, the idea of installing and oversized furnace is certainly nothing new. The heating contractor can jump from one size furnace to the next and probably not increase cost more than a few dollars.

"Therefore, the heating contractor is accustomed to playing it safe and going to the larger capacity unit and then if the system is oversized, adjusting the input to his furnace back.

Same Reasoning Does Not Apply

"The same reasoning, however, does not apply on residential air conditioning. On a dollars per B.t.u. basis, the cooling side of a combination year-round air conditioning unit costs 10 to 11 times as much as the heating side.

"The refrigeration compressors powering these units are manufactured in integral sizes of 2, 3, 5, and 7½ hp. and to go from one size unit to the next larger size actually means an increase of at least 50% in capacity and approximately a 40% increase in equipment cost.

"Since we are dealing with a unit in the 2-ton size, with a cost in the neighborhood of \$800 versus \$200 per furnace, the jump from a 2-ton unit to a 3-ton unit represents in a number of cases the figure almost equal to the cost of the heating system alone. You're not talking a few dollars but rather several hundreds of dollars difference.

"On those installations which had been made using commercial standards, reports starting coming back to Syracuse to the effect that problems were arising with these applications. The customers' complaints were 'it's too cold and clammy.'

"The answer soon became fairly obvious to the engineers. The systems were oversized to such an extent that the refrigeration compressor, while it would handle the sensible cooling requirements easily, could not be made to run long enough for dehumidification.

"Since the customer felt uncomfortable, his first reaction was to lower the thermostat setting, further aggravating his conditions inside the house. All of these troubles started the engineer to thinking in terms of a proper method of estimating residential air conditioning loads. As a result of this work, the '24-hour method' of calculating cooling loads for residences was developed."

Development of the Carrier "24-hour method" of calculating residential air conditioning loads was reviewed by Robinson, who pointed out such important discoveries as that residential loads "peaked" four to five hours after outside temperature and that the sensible heat factor was about .75.

Progress of the residential air conditioning industry to the place where it can meet economically the requirements of all the five basic kinds of home heating systems was also cited.

"In this country there are 35 million homes, excluding apartments. In the case of each of

(Concluded on next page)

BETZ

Model **C** for Reach-Ins



EXCLUSIVE BETZ DESIGN

- Installed above first shelf with the refrigerated air exhausted against back wall.
- Uniform temperature throughout cabinet without door sweating or refrigeration losses.
- All aluminum construction with life lubricated motor plus thermal protection.
- Made in five sizes, from 100 to 300 BTU per 1° T.D.
- Extremely compact—Betz ratings you can trust.

QUALITY at LOW COST

BETZ CORPORATION

HAMMOND
INDIANA

Air-Cooled Trend--

(Concluded from preceding page) these, the type of central air conditioning which is best and most economical to use depends upon heating system."

Robinson outlined the five "basic situations" as follows:

1. Forced warm air system in good condition.

"This is a home with a forced warm air heating system in good condition. There are about 5,000,000 home heating systems of this type. The furnace is installed in a closet and is a standard vertical heating plant.

"It could also be in a basement or utility room, or it might be one of the horizontal units found frequently located in a crawl space or attic, or a counterflow or downflow heating plant employed in a basement-less house.

"Regardless of the particular model or location, any forced air heating system in good condition can be converted easily at a low cost to year-round air conditioning with one simple step, using a conversion type of unit.

"A conversion air conditioning coil is placed in the ductwork at the outlet end of the furnace using the furnace blower and filter to circulate clean air. The conversion coil adds cooling and dehumidifying. A weatherproof and tamperproof refrigerating unit requiring no water is placed outside to supply cooling to the coil.

"The cost of this conversion in the average size three-bedroom house can run as low as \$1,100 to \$1,300 and this can be paid for by means of a special three-year financing plan now available or through standard home improvement loans or it can be added to existing long term mortgages, reducing the cost to a few dollars a month over the period of the mortgage. Now, let's take a look at another case."

2. Worn out warm air furnace.

"This home also has a forced warm air furnace but it's an older model. By now it's in pretty bad shape and due for replacement. There are about 1,500,000 homes like this.

"Our advice naturally enough is: 'Don't replace a furnace with a furnace,' first take out the furnace, leaving the ductwork. Then attach a year-round unit to the same duct system.

"This unit," Robinson explained, "provides everything from that one compact cabinet: winter heating, summer cooling, and dehumidifying and the circulation of filter-cleaned air. Since you can condition the basement as well, you've added another room to your house which you can use for recreation, utility, or work shop.

"The cost without cooling tower and wiring or air-cooled condenser will run about \$800 to \$1,100 more than the new heating system alone.

"The next situation is shared by some 7,000,000 families in this country.

3. Gravity furnace in basement.

"Perhaps you are one of the 7,000,000 with one of these monsters—a gravity warm air furnace—downstairs. (Fig. 1). Between the furnace and those ugly air ducts, not to mention

the dirt and dust, you've taken up practically all the basement space and head room.

Let's take out the furnace. It's long overdue.

"And the mess along with it. Then we will remodel this duct system a little, so let's take out the old pipes. We'll install a year-round Weathermaker at a more convenient location with a streamlined overhead duct system (Fig. 2).

"And now in this conditioned space you have added there is room for ping pong, darts, or whatever kind of comfortable recreation you enjoy. I'd like to

point out that all three of these heating situations we described have one thing in common. They all have a simple duct system, all or part of which could be used for air conditioning.

"Now we come to what was once considered the no-man's land of central air conditioning. The homes without ducts, 22 million of them. Seventeen million of these fall into the class of those heated with floor furnaces or space heaters.

4. Home with floor furnace.

"There are many fine houses of this type in the south, southwest, and the far west. This

year we can solve this problem with a summer Weathermaker.

"The air conditioning unit, a little larger than a room air conditioner, is installed with a minimum cost duct system. Here we show it in the attic (Fig. 3) but it can be placed in the basement or crawl space or we might even run down a hallway ceiling and use this as a duct with grille openings cut through to the rooms around the hallway. A refrigeration unit requiring no water is in the yard.

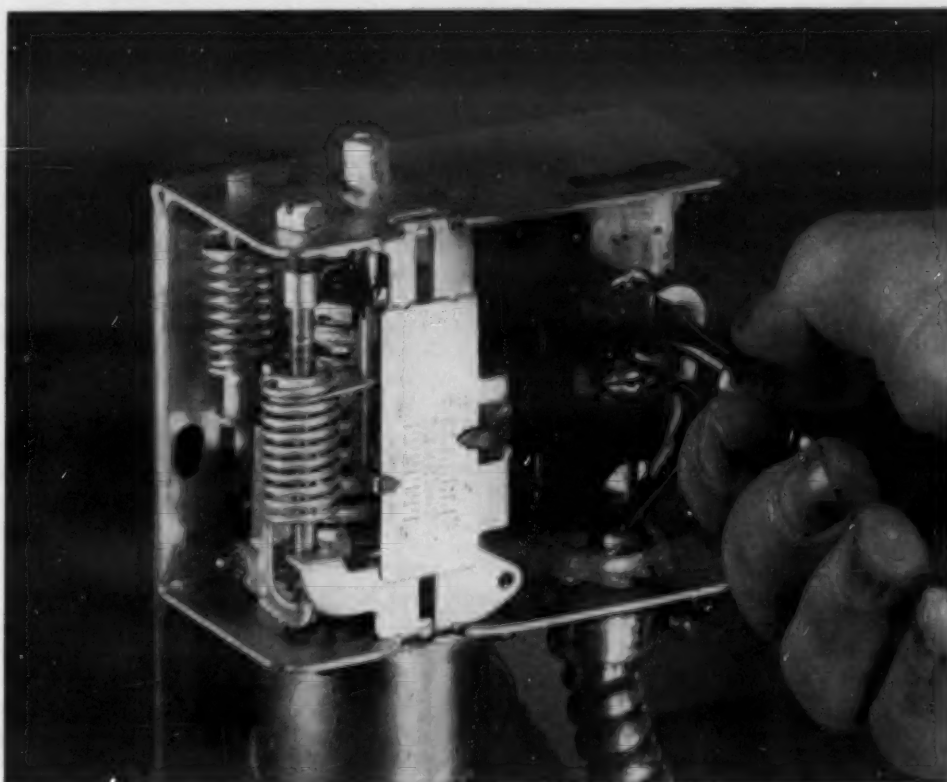
"The cost in an average house can run as low as \$1,400. Again, financing methods avail-

able can reduce this to only a few dollars a month. This leaves one final class of houses: the 5,000,000 with hot water or steam heat.

5. Home with radiator and boiler.

"These homes also lack a central duct system and until this year these too were quite difficult and expensive air conditioners.

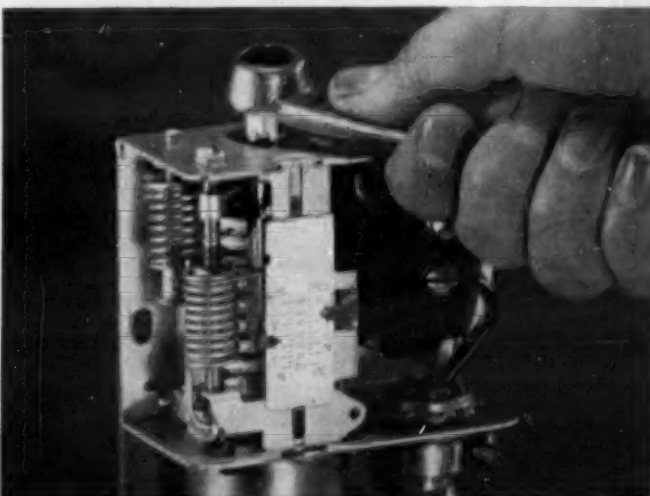
"A summer Weathermaker is installed with a minimum cost duct system. It provides summer air conditioning for the house. Outside is the unit requiring no water."



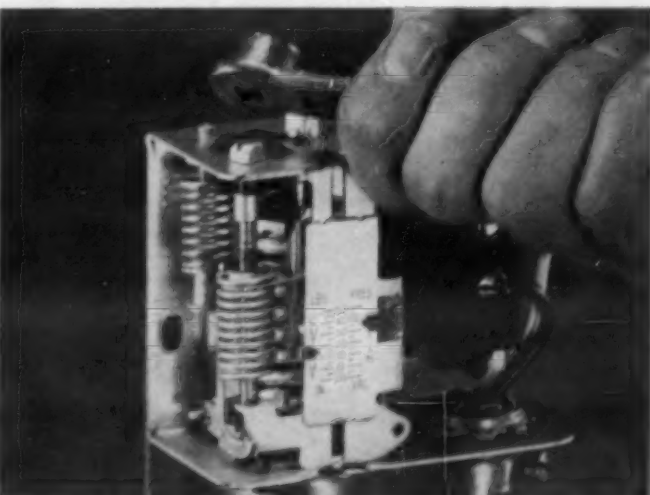
Easy to install: Mount control on compressor unit or any flat surface (bracket furnished) and connect flare nut on capillary. Then, make 2 simple electrical connections; terminals are easily accessible.



Series 270: Available in single or double pole construction with or without external adjusting knob.



Cut-in setting: To raise or lower cut-in setting, turn cut-in screw as required . . . differential does not change.



Cut-out setting: Turn cut-out screw to raise or lower cut-out setting independently of cut-in setting. This widens or narrows differential.

PENN REFRIGERATION CONTROL IS EASIER TO INSTALL AND ADJUST

Single Pole Series 270 Combines

Simple Design With Snap-Acting Contact

Action For Long-Life Dependability

Designed with you in mind, the Series 270 takes all the hard work out of installation. And, adjustment is even simpler because of Penn's direct-reading, calibrated scale indicating cut-in and cut-out settings. Time-wasting subtraction or addition is eliminated.

Once installed, the Series 270 will perform longer, better, more accurately! One reason is the exclusive contact structure which provides "roll-wipe-snap" action on closing and opening. There's no bounce . . . no closing arc . . . no welding of contacts.

Try the Penn Series 270 on your next job and you'll see the great difference. Ask your wholesaler for the "270." Penn Controls, Inc., Goshen, Indiana.

PENN AUTOMATIC CONTROLS

For Heating, Refrigeration, Air Conditioning, Gas Appliances, Pumps, Air Compressors, Engines.

Detroit Commercial Sales

Contractors Installed 1,303 Units In 1954;
Total of 408 Placed In First Half of 1955

DETROIT—A total of 1,303 condensing units for commercial refrigeration applications was installed during 1954 in the city of Detroit.

Total for the first six months of 1955 was 408.

These figures were determined by AIR CONDITIONING & REFRIGERATION NEWS from an analysis of installation permits issued by the city's Department of Buildings and Safety Engineering.

Data Broken Down Into 6 Tables

They do not apply to the entire Detroit metropolitan area, however, because the permits in question cover only those installations within the Detroit city limits.

The commercial refrigeration installation data has been

broken down into six accompanying tabulations. These show sales by size and by month for 1954 and the first half of 1955, sales by size for the years 1951 through 1954, a comparison of installations by make for 1954 and the first half of 1955, a break-down of 1954 installations according to individual contractors, and where the units were installed in 1953 and 1954.

Biggest single month for 1954 in Detroit was March when 168 units were installed, according to the permit data. May was second with 128, and January a close third with 126. Close behind behind were February with 120 and June with 119.

Little in the way of a seasonal pattern is seen in the 1954 figures. Although November and December were low with 80 and

Sales for Past 4 Years Compared by Size

Size In Hp.	1951	1952	1953	1954
1/4	237	284	167	126
1/2	302	381	265	217
3/4	320	275	235	173
1	323	240	229	170
1 1/2	150	135	148	138
2	130	136	182	160
3	124	77	101	144
5	53	23	51	94
Over 5	57	46	58	81
Total	1,796	1,534	1,436	1,303

Unit Installations by Make For 1954 and 1955

Rank	1954	1955*
A	247	85
B	228	57
C	169	42
D	102	40
E	91	57
F	79	11
G	77	26
H	50	23
I	46	6
J	38	2
K	37	85
L	32	57
M	28	42
N	25	40
O	21	57
P	7	11
Q	4	26
R	3	23
S	3	6
T	3	2
U	3	2
V	3	18
W	3	16
X	2	7
Y	1	9
Z	1	17
AA	1	10
Total	1,303	408

*First six months.

82, respectively, July with 89, and August with 90 were almost as low—during a period that might be expected to boost installations.

April Installations Lead First Half

Similar observations can be made in the table showing installations for the first six months of 1955. April was highest in this period with 98. June was second with 88 while March ranked third with 67 installations. February was lowest with 43.

Incidentally, the first six months of 1955 seem to be running well behind the corresponding period of 1954 in terms of number of installations.

A third table compares installations by size of unit for the period of 1951 through 1954. It will be noted that the 1/2-hp. size was the largest in 1954 with 217 while the 3/4-hp. unit was next with 173, followed closely by the 1-hp. size with 170.

Where Commercial Refrigeration Units Were Installed In Detroit In 1953 and 1954

Establishment	No.	Units	No.	Units
Apartment house	5	5	...	...
Bakery and bakery shop	37	42	24	29
Banana ripening	1	2	...	...
Bank	...	...	1	1
Beer store	16	18	15	18
Bottling plant	1	1	2	16
Bowling alley	...	...	...	...
Brewery	...	...	1	2
Cafeteria	...	...	2	5
Candy store	1	1	...	...
Caterer	3	3	3	4
Cemetery	1	1	...	...
Cheese manufacturer	...	...	1	1
Chemical manufacturer	...	...	1	2
Church	2	2	1	1
City-County building	...	...	1	5
Clinic	2	2	...	...
Club	5	8	5	8
Composing room	...	...	1	1
Confectionery	10	12	12	15
Construction company	...	...	1	1
Contractor	1	1	...	...
Convalescent home	1	1	...	...
Dairy	9	11	6	12
Dairy bar	1	1	3	9
Dairy distributor	1	1	...	...
Department store	1	1	...	...
Dime store	6	9	1	2
Doughnut shop	...	...	1	1
Drug manufacturer	7	24	8	11
Drugstore	16	23	12	16
Egg producer	1	1	...	...
Factory	7	16	27	35
Fish market	3	3	1	1
Fish wholesaler	1	1	...	...
Florist	16	18	7	9
Food processing	2	3	7	10
Food store	437	786	786	679
Food wholesaler	2	2	6	6
Frog market	1	1	...	...
Fruit wholesaler	1	1	...	...
Fur store	...	...	1	1
Gift shop	1	1	...	...
Home for aged	1	5	1	1
Hospital	16	24	13	57
Hotel	9	17	10	14
Humane society	1	1	...	...
Ice cream stand	18	34	...	...
Ice cream store	4	5	...	...
Ice cream manufacturer	12	13	2	6
Ice plant	1	1	...	...
Ice rink	1	3	4	11
Ice vendor	6	8	11	11
Institution	2	3	1	3
Laboratory	2	4	4	5
Liquor store	1	2	...	...
Meat packer	9	9	7	10
Meat processor	1	3	...	...
Meat wholesaler	11	17	...	...
Mortuary	...	...	1	1
Newspaper	1	1	...	...
Nurses home	1	1	...	...
Office	1	1	...	...
Poultry market	6	6	3	6
Poultry processing	2	2	6	9
Poultry wholesalers	3	4	...	...
Restaurant	98	122	108	122
Sausage distributor	1	1	...	...
Sausage manufacturer	3	3	1	2
School	1	1	2	3
School cafeteria	...	...	2	4
Seed testing laboratory	2	2	...	...
Stadium	2	3	1	1
Storage	1	3	3	6
Store (unspecified)	6	7	17	20
Tavern	80	97	83	94
Telephone company	2	7	1	1
Theater	11	11	1	1
University	1	11	...	...
Utility office	1	1	...	...
Warehouse	1	1	9	13
Zoo	...	...	1	1
Total	920	1,496	851	1,303

Smaller Size Unit Installation Falling


Installations of commercial units have been falling off in Detroit in recent years, as this table indicates, but it is interesting to note that this drop has occurred in the smaller size machines.

An almost steady increase has been shown over the four-year period tabulated in 2-hp. and larger units. For example, there

were 160 2-hp. units put in during 1954 compared to 130 in 1951; 144 3-hp. machines compared with 124; 94 5's compared with 53; 81 over 5 hp. compared with 57 in 1951. These figures probably reflect the trend to more and larger refrigeration equipment in supermarkets.

A fourth table compares installations by make for 1954 and the first six months of 1955. The makes are ranked according to number of units installed in 1954.


The top two are fairly close, make A having 247 units in 1954 and make B, 228. Make C follows with 169 units while D is represented by 102. In all, 27 (Concluded on next page)




FOSTER

ORIGINATOR AND OLDEST CONTINUOUS MANUFACTURER OF
REFRIGERATORS AND FREEZERS


Designed and engineered for heavy duty performance




REACH-INS




UPRIGHT FREEZERS



TWO TEMPS



UNDERCOUNTERS



BEVERAGE COOLERS

FOSTER BUILDS OVER 200 MODELS OF MATCHED PRODUCTS ONLY ONE TOP QUALITY LINE! NO 2ND OR 3RD LINES!

Whether it's for a hotel, restaurant, school, hospital, or any institutional user — there's a model designed specifically to fit individual needs.

Foster has had long and successful experience in building welded all aluminum refrigerators and freezers for installations all over the world. They have met every in-the-field test for strength, durability and long life.

Thousands upon thousands of satisfied users know that Foster meets the most exacting specifications, the most critical demands of hard, day to day use, year after year.

And most important—they're priced low and right!

EXCLUSIVE SALES FEATURES CLOSE ORDERS SELECTIVE DISTRIBUTION INSURES PROFITS!

NATIONWIDE FACTORY TRAINED REGIONAL SALES MANAGERS FOR SALES AND SERVICE.

FOSTER REFRIGERATOR CORP.
HUDSON, N. Y.

For information write to Box 32 at the above address.

PRESSTITE

165 Cork Insulation Tape



Anti-Sweat Pipe Wrapping

Stops Drip!

See your wholesaler or WRITE

PRESSTITE ENGINEERING CO.
3774 CHOUTEAU AVE. • ST. LOUIS 10, MO.

Quick installation, quick profit...

Ranco's new control for new ice bank milk coolers gives you both!

Here's a new control that fits right the first time... and offers better ice bank regulation than any other milk cooler control on the market.

Location of the control bulb determines the size of the ice bank. Control has 72" capillary tube, 3/16" diameter bulb and a strip clamp. Single-pole, single-throw switch opens on temperature drop at 32°F, recloses at temperatures slightly over 32°F.

Other Ranco milk cooler controls simplify your replacement job, too. Models 010-1477, 010-1414 and 010-1829 are efficiently adaptable to either waterspray or ice bank coolers, can be installed quickly.

Ranco Replacement Reference No. 1544 describes nearly 5,000 additional Ranco refrigeration and air conditioning controls—each tailored to a specific job. Purchase your copy from your Ranco wholesaler today (not available from the factory).



Exact replacement
010-100 Ice Bank Control



MARSH Instruments

THE SERVICEMAN LINE of Testing Gauges, Testing Thermometers, Timers, etc.

PRESSURE GAUGES and Dial Thermometers for all services.

MARSH-ELECTRIMATIC, Water Regulating Valves, Solenoid Valves.

MARSH INSTRUMENT COMPANY
Sales Affiliate of Jas. P. Marsh Corporation
Dept. D., Skokie, Ill.

1954 Detroit Commercial Installations by Size by Month

Month	1/2 hp.	3/4	1	1 1/2	2	3	5	Over 5*	Total
January	11	21	13	22	10	17	11	8	126
February	4	14	19	25	18	12	16	10	120
March	29	24	21	14	27	18	16	15	168
April	5	17	12	17	10	16	8	9	97
May	28	21	14	17	8	13	6	6	128
June	9	14	21	14	4	19	15	16	119
July	4	17	12	14	12	13	12	5	89
August	—	10	7	16	11	11	16	7	90
September	4	12	17	10	11	14	29	11	100
October	15	31	17	3	13	8	10	5	104
November	8	17	5	9	6	8	11	4	80
December	9	19	15	9	8	11	3	3	82
Total	126	217	173	170	138	160	144	91	1,303

*Includes 12 7 1/2-hp. units, nine 10's, 14 15's, seven 20's, three 25's, nine 30's, eight 40's, 14 50's, four 75's, and one 100-hp. machine.

1955 Detroit Commercial Installations by Size by Month

Month	1/2 hp.	3/4	1	1 1/2	2	3	5	Over 5*	Total
January	5	12	14	6	7	2	2	2	57
February	4	11	3	6	6	6	5	1	43
March	5	11	11	5	6	6	9	2	67
April	1	20	21	17	9	17	8	3	98
May	4	15	4	10	4	5	3	5	55
June	1	12	6	12	12	18	13	5	88
Total	20	81	59	56	44	54	40	23	408

*Includes nine 7 1/2-hp. units, six 10's, two 15's, four 20's, one 25, one 30, one 37 1/2, four 40's, two 50's, and one 500-hp. machine.

How Contractors Shared 1954 Installations

Contractor	No. Units	%	
A	152	11.7	
B	101	7.8	
C	60	4.6	
D	44	3.4	
E	44	3.4	
F	43	3.3	
G	41	3.1	
H	40	3.1	
I	36	2.8	
J	36	2.8	
K	32	2.4	
L	32	2.4	
M	31	2.4	
N	30	2.3	
O	30	2.3	
P	29	2.2	
Q	26	2.0	
R	22	1.7	
S	21	1.6	
T	20	1.5	
U	18	1.3	
V	18	1.3	
W	17	1.3	
X	16	1.2	
Y	14	1.1	
Z	13	1.0	
AA	13	1.0	
BB	12	.9	
CC	12	.9	
DD	12	.9	
EE	11	.8	
FF	11	.8	
GG	11	.8	
HH	10	.8	
3 installed 9 ea.	27	2.1	
3 installed 8 ea.	24	1.8	
5 installed 7 ea.	35	2.7	
3 installed 6 ea.	18	1.4	
3 installed 5 ea.	15	1.2	
6 installed 4 ea.	24	1.8	
13 installed 3 ea.	39	3.1	
19 installed 2 ea.	38	3.0	
26 installed 1 ea.	26	2.0	
Total	115	1,303	100.0

Detroit Commercial Sales --

(Concluded from preceding page) true for the 1954 Detroit installations. different makes are tabulated.

In another table will be found data showing how the 115 contractors involved in 1954 installations shared the jobs. This number is down somewhat from the 129 found in the previously published tabulation for 1953 installations.

Contractor A Garnered 11% of Installations

With 152 units contractor A garnered a whopping 11.7% of the total installed during 1954. Nearest competitor was B with 101 units for 7.8%. C was third with 60 units for 4.6%; D and E tied with 44 units each or 3.4%.

At the other end of the list will be found 13 firms who installed three units apiece, 19 who put in two each, and 26 with only one installation in the city.

All previous such studies have indicated that a tenth of the contractors install half of the jobs in Detroit.

This "rule of thumb" holds

Top 12 Contractors Install 661 Units

A check of the figures will reveal that the top 12 contractors for 1954 (A through L), representing 10.4% of the 115 involved, installed 661 condensers.

The latter represent 50.7% of the 1,303 which went in during 1954.

Final tabulation of the Detroit commercial refrigeration installation data shows the type of establishment where the units were installed during 1953 and 1954.

This shows that the 1,303 units recorded in 1954 went into 851 different places. The 1,436 units of 1953 were installed in 920 different establishments.

The food store classification, as might be expected, is the largest user both in terms of number of units and number of establishments. During 1954 a total of 679 units was installed in 413 Detroit food stores. This

is down somewhat from the 786 units in 437 food stores shown in the 1953 listing.

Second largest user was the restaurant group. The 1954 tabulation lists 122 units in 108 restaurants. Same number of units (122) as installed in 98 restaurants during 1953.

Taverns Third Largest Users

Taverns are third with 94 units in 83 establishments in 1954, compared with 97 units in 80 places during the preceding year.

Factory installations accounted for 35 units in 27 different places in 1954 while 29 units went into 24 bakeries.

Other classifications of note during 1954 were bakeries and bakery shops with 29 units, beer stores with 18 units, bottling plants with 16 units, confectioneries with 15 units, dairies with 12, drugstores with 16, hospitals with 57, hotels with 14, and warehouses with 13.

Fifty-two different classifications are listed for the 1954 installations.

Haggett Appointed BTC Distributor

BINGHAMTON, N. Y.—Haggett Store Engineering Co. of Boston has been appointed exclusive distributor for BTC refrigeration products in eastern Massachusetts, Frederic A. Celler, general sales manager of The Brewer-Titchener Corp., has announced.

The appointment is in keeping with Brewer-Titchener's policy of protected distribution, it was stated. The new Massachusetts distributor will handle sales of BTC dairy, candy, frozen foods, and ice cream cabinets as well as BTC ice cube makers.

The Haggett company's co-owners, James and Richard Haggett, have been associated with commercial refrigeration, air conditioning, and allied fields since 1947.

Commercial Refrigeration

Apple Cold Storage Raised 60,000 Bushels For Winter Carryover

SOUTH HAVEN, Mich.—A 60,000-bushel-capacity cold storage plant for apples, to be built for the South Haven Fruit Exchange, will boost total storage room at the exchange to 107,000 bushels and allow a change in apple marketing operations.

In the past, the exchange has packed and sold a big percentage of its apples at harvest time. When the new plant is completed, much of the fruit will be put directly into cold storage from the orchards, then packed out of storage during the winter.

The plant is scheduled to be finished in time for the 1956 harvest at a cost of \$80,000, according to Cornelius Bus, manager.

The structure will replace a

smaller cold storage plant erected in 1923. This was the first cold storage plant built by a fruit exchange in Michigan.

The new plant will adjoin the fruit packing plant and will be 54 by 126 ft., having a clear span ceiling 20 ft. high. This will allow mechanical handling of all fruit.

Thrifty Mart To Highlight Frozen Foods In 10 Stores

LOS ANGELES—About 125 ft. of frozen food display cases and an additional 50 ft. of frozen convenience foods are planned for each of the 10 Thrifty Mart chain of supermarkets to be opened here during 1956, Roger M. Laverty, president of Fitzsimmons Stores, announced recently.

Laverty said that he was trying to meet frozen food fixture requirements for at least two years ahead.

heat-x PC UNITS

THE ONLY PACKAGE CHILLERS WITH THESE "EXTRAS"

All Non-Ferrous Water Passages

Inner-Fin Construction

Capacity Controller



CHILLER

PLUS...

CONDENSER

Exclusive Inner-Fin design. All water passages of non-ferrous construction. Single pass, eliminating any oil trapping problem. Insulated with rock cork covered with sheet metal casing.

Combination Superheater-HEAT INTERCHANGER
Provides increased sub-cooling, thereby improving expansion valve performance and permitting full use of entire evaporator surface. This unit is also the basic component of the capacity controller.

Patented Inner-Fin construction. All non-ferrous water passages eliminate any corrosion problem. Copper inner-fins in refrigerant passages greatly increase heat transfer efficiency.

PATENTED INNER-FIN CONSTRUCTION of refrigerant passages means 'PC' Chillers provide greater cooling capacity with much less bulk. Non-Ferrous construction of all water passages eliminates any corrosion problem.

Capacity Control, available on 2 HP through 15 HP models for use with hermetic and semi-hermetic units, eliminates short-cycling during light load conditions and maintains constant suction pressure.

Entirely self-contained, 'PC' units are delivered completely wired, ready to install. Available in 2 HP through 75 HP models.

Catalog No. 1044 Containing Complete Specifications FREE on Request.

HEAT-X, Inc.
BREWSTER • NEW YORK

New MARCO
TYPE Y5 SHADED POLE MOTOR
1/25 to 1/4 h.p.

- Higher Efficiency
- Better Stability
- Cooler Operation

LOW in COST

• This new, large diameter (5-1/2"), more powerful motor has all the features of the famous Marco Motors used in hundreds of thousands of air conditioning units—in fans, blowers and furnaces. Power up to 1/4 h.p. can be supplied—or—in the new "wafer thin" design (as short as 2-1/2 inches) 1/15th horsepower.

Get the facts on this motor today!

MARCO INDUSTRIES, INC.
790 Terrace Blvd. • Depew, N. Y.



BUYING OR SELLING . . .

**No matter which side of the desk you're on,
you need the NEWS**

The very reasons you read the NEWS . . . for information and to keep abreast of this fast-moving industry . . . make it your most important advertising medium! Your customers and prospects alike turn to the NEWS every week—just as you do—to learn the latest from the editorial columns and the advertising pages.

That's why the NEWS has been the foremost publication in the air conditioning and refrigeration industry for over a quarter of a century.

Now, with its new streamlined look, the NEWS brings you more advertising action than ever before. Top reader interest, stepped up editorial coverage—more services for advertisers—improved visibility for advertisements and editorial columns help you sell in this new, better and easier-to-read format.

Put yourself on the other side of the desk. Think of the reading habits of your customers and prospects, and you'll do your first advertising job where the first job is being done in AIR CONDITIONING & REFRIGERATION NEWS.

**AIR CONDITIONING
& REFRIGERATION**

The Newspaper of the Industry

NEWS

450 West Fort Street, Detroit 26, Michigan

NEW YORK, 521 Fifth Ave., Murray Hill 7-7158, Robert M. Price.
CHICAGO, 134 S. LaSalle St., Franklin 2-8093, Allen Schildhammer.
DETROIT, 450 West Fort St., Woodward 2-0924, Joe Sullivan.

*The Newspaper That Carries
More Advertising By
Far Than Any Other
Publication In The Field.*



Refrigeration Problems And Their Solution

By Paul Reed

For Service and Installation Engineers



Standard and Fast Trip Heater Coils, For Line-Type Motor Protectors (3)

We have seen that by placing the motor protective device inside the motor frame, or on the "hot-spot" of the motor frame or case, we can take advantage of the heat of the motor to directly operate the protector and stop the motor when it becomes overheated due to excessive overload or under-voltage.

This method of protecting a motor by means of "built-in" or "inherent" protectors, can be applied to single-phase motors, but is difficult to apply in the case of three-phase motors in which at least two of the three lines to the motor must be disconnected.

LINE TYPE MOTOR PROTECTORS

For the protection of three-phase motors we ordinarily use motor protectors out in the lines, away from the motor. Since these line type motor protectors are not affected directly by motor heat, we must depend upon the over-current flowing in the lines as a result of overload or under-voltage, to

directly operate the motor protector.

We found that the wattage and current flowing through the lines are approximately proportional to the load on the motor, so if the line type protector is set to open at a predetermined current or wattage, proportional to the maximum allowable overload, the motor could be adequately protected.

USING HEAT TO CONTROL DELAY

This assumes that the line current and the temperature of the motor are always "in step," but this is not always true. In starting and with stalled rotor, the line current may quickly jump to three or four times its normal value, but the motor has not had time to overheat. Clearly then, a delay must be introduced to allow the protector to carry heavy over-currents and over-wattages momentarily, without opening unnecessarily, and yet open on sustained overloads.

Since it is a matter of allowing time for the motor to heat up, the heat factor is used in the operation of the line overload protector. That is, instead of the excessive current directly causing the protector to open, the excessive current produces excessive heat, and it is this heat that actuates the protective device. Thus there is a delay in the operation of the protector, just as there is a delay in the overheating of the motor, and it becomes a matter of overheating in both the motor and the protector.

SOLDER POT TYPE PROTECTOR

The type of line overload protector used in most magnetic across-the-line starters, is known as the "solder pot" type. As shown in Fig. 2, it consists of three main parts (1) the heater coil (2) the solder pot (3) the switch.

1. The heater coil is a small coil of resistance wire, that carries the line current. As the line current varies, the temperature of the heater coil varies, but there is some delay between an increase in line current and the corresponding increase in temperature of the heater coil.

2. The solder pot consists of (a) a stationary metal post or spindle inside the heater coil (b) a metal ratchet soldered to one end of the spindle, with a spring that causes the ratchet to rotate on the spindle if the solder melts. (c) an electric switch attached to the ratchet, and whose contacts open when the ratchet turns on the spindle. The switch contacts may be in the main line to the motor, but in magnetic starters, they are in the auxiliary circuit, and in series with the magnetic or solenoid coil that operates the main line contactor.

Also, there is a reset pawl that rewinds the spring and recloses the contacts of the protector after the protector has tripped. The reset can be automatic, but is more commonly manual.

HOW SOLDER POT PROTECTOR OPERATES

As long as the line current is normal or less than the predetermined allowable maximum, the heater coil is warm but not hot enough to melt the solder securing the ratchet to the spindle. However, if and when the line current becomes excessive, the heater coil becomes hot enough to melt the solder, and the ratchet is then loosed on the spindle. The spring can then turn the ratchet on the spindle and open the switch contacts.

(The term "solder" is used for convenience, instead of the more accurate expression, "low melting point alloy." Ordinary solder must never be used, as the accuracy of the solder-pot type protector depends upon the melting temperature of the alloy, and this is carefully controlled in the factory making the protector.)

The amount of current flowing through the heater coil determines its temperature, although time is an important factor. If the load on the motor increases, the wattage also increases in approximately the same proportion. Consequently, the temperature of the heater coil also increases—not exactly in proportion, but near enough so that the solder is melted at a current value that represents the maximum allowable load on the motor, and its maximum allowable temperature.

Nevertheless, the temperature

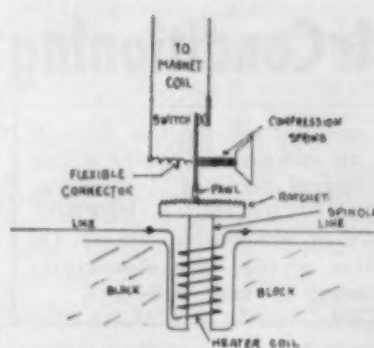


FIG. 2—Solder pot type of line motor protector.

rise of the heater coil, heating of the spindle, unsoldering of the ratchet, and opening of the switch, all take time. Thus the solder pot type protector, while accurately protecting against sustained overloads does provide a delay period to allow short overloads, even though they may be extremely heavy.

ABOUT 1/2 MINUTE TO TRIP ON LOCKED ROTOR

For example: the protector may open and stop a 1-hp. 230-volt motor if it is overloaded

to the point where it is drawing 9 amps for as long as several minutes; yet this same protector, using the same heater coil, would open and stop the motor in about 1/2 min. on stalled motor (locked rotor), which would result in a line current of about 25 amps.

The solder pot protector will allow a comparatively small overload or over-current due to under-voltage to continue for several minutes, while it will not allow a very heavy over-current, such as may result from locked rotor or slow getting up to speed, to continue more than 1/2 a min. to 1 min. For this reason, the solder pot protector and others that depend on time as well as current, are often referred to as "inverse time element thermal overload relays," meaning that the time that it takes for them to heat up and trip is inversely proportional to the amount of current: low over-current, long tripping time; high over-current, short tripping time.

(To Be Continued)

Surrounded by Cleveland

Heart of downtown—only minutes away from everything. 800 beautifully decorated, spacious rooms and suites—each with private bath and radio.

Room Rates from \$4

Hotel Hollenden

Cleveland's Most Interesting Hotel

Conveniently Located at
Superior Ave. at East 9th
Phone: MAin 1-4700

Famous for fine
wining and dining.
Six outstanding
restaurants and bars.

Garage open
round the clock.

Excellent facilities for
Conventions and
Special Events.

ROBERT P. JOYCE,
General Manager



FIELD REPRESENTATIVE FOR HOUSTON AREA -

If you are a technical graduate, 25 to 32 years of age, with experience in refrigeration and/or air conditioning, an opportunity for advancement with an outstanding and progressive company is available. After a factory training program, very interesting work awaits you calling on contractors, wholesalers and manufacturers of all types of equipment. Very liberal salary, bonus and expense allowance arrangements for an energetic sales engineer.

Write BOX A5425, Air Conditioning & Refrigeration News

Watch

HM
Halstead & Mitchell

in
February

Harry Alter's Newest

DEPENDABOOK No. 163

Over 10,000 (count 'em!)
items, shown and priced:

REFRIGERATION PARTS and Supplies

Also Electric Motors and
Parts and Air
Conditioning

WHOLESALE
ONLY

Write for your copy and save money

The HARRY ALTER CO., Inc.

1728 S. Michigan Ave., Chicago 16, Illinois
134 Lafayette Street, New York 13, N. Y.
122 Parkhouse Street, Dallas 7, Texas



"Harry Alter
gives you snappy service!"

Recommended Air Conditioning Standards for New Govt. Bldgs. New Plant Expands Duc-Pac Facilities

Most of the new buildings constructed by the Federal government in the future will be air conditioned under a new policy recently adopted by the General Services Administration. The Jan. 9 issue of *AIR CONDITIONING & REFRIGERATION NEWS* carried a report of the announcement. On this page is the text of the portion of the recommendations which applies to the air conditioning of new buildings.

VENTILATING AND AIR CONDITIONING

33a. The standards of ventilating and air conditioning of the P.B.S. are very good. In our comments on this division of the Manual and the Standard Specifications, we have listed details primarily.

33b. The basic change in standards which we recommend is where air conditioning should be used.

33c. The P.B.S. standards call for air conditioning basically in buildings in those regions of the United States where the effective temperature is 84° F. or higher for a prolonged period of summer heat. This applies to Office Buildings, Federal

Court Houses, and Post Offices.

33d. Air conditioning means ventilation with controlled temperatures, with a proper rate of air motion, proper air cleaning, and humidification in winter, and dehumidification in summer.

33e. Air conditioning throughout the nation has become more common in use lately than it had been formerly. What with the increase in lighting intensities and the construction of "block-type" buildings, designed to get a greater amount of usable floor areas within the dimensions of a given piece of property, air conditioning has in many instances become a "must."

AIM OF AIR CONDITIONING

33f. The aim of an air conditioning system is that all the people occupying the space will be unaware of the air conditions—these being neither too cold nor too warm—with the absence of drafts. Such conditions are obtained, generally, when the room temperatures are between 76° and 78° in summer with a relative humidity of about 45%, and 74° to 75° in winter with a relative humidity of about 35%. Thus, interior spaces—considered as more than 16 or 18 ft. from the windows—must be ventilated to be habitable; and the temperature of these spaces must be held at such a point that the workers therein can be comfortable.

33g. We therefore recommend

that the Government standard of outside weather of 84° effective temperature, for a prolonged period of summer heat, as the dividing line between air conditioning buildings or not, be lowered to 80° effective temperature. While this will result in many more Government buildings being air conditioned throughout, it also means that Government building will be designed more in line with present day private practice and will result in reducing the advantage held by private industry to take away Government employees because of the competitive advantages of working conditions in privately owned buildings.

HOSPITALS

33h. Hospitals are also getting closer attention. It is common practice today to install air conditioning (except in a few states of the Northwest where the outside relative humidity in summer never exceeds 65%) in Operating Rooms, Recovering Rooms, Delivery and Labor Rooms, and in many cases in Nurses' Work Rooms and Central Sterile Supply Rooms. In the larger hospitals, equipped with Research Laboratories, Animal Rooms, X-ray and Cystoscopic Rooms, these facilities, too, are being air conditioned; all with the object of greater efficiency during summer weather of these important hospital functions.

33i. Patients' rooms in hospitals are getting more serious consideration today. It is being gradually recognized that in those parts of the country where the outside wet bulb temperature exceeds 67° for 55% of the summer season, patients' rooms should also be air conditioned as a measure for speedier recovery from their illnesses. Indeed, many patients will wait, if they can, until the summer season is over, rather than go into a non-air conditioned hospital during the hot weather; and this results in a reduction of full usage of the available bed capacity.

33j. We recommend that P.B.S. be guided by the above factors in designing hospitals, and that, if money is short, the working parts of the air conditioning systems, such as ducts, piping, fans, and cooling units and all other built-in equipment be installed at the time of construction, leaving the refrigerating plant to be installed later, as soon as more money is available.

POST OFFICES

33k. In the case of Post Offices, one factor which increases the cost of air conditioning is the high ceilings in the Work Spaces. It is suggested that if the Post Office authorities can devise some method of inspection and supervision which will permit lower ceiling heights in

these spaces, the initial cost of the air conditioning installation will be reduced. In that case, Post Offices (except in the very small communities) would fall into the same 80° effective temperature category as Office Buildings, and Court Houses, which category we recommend.

HIGH VELOCITY UNITS

33l. Government buildings have up to now been designed with "conventional systems" for interior spaces, with separate peripheral systems—in some cases with high velocity units. The conventional systems for the interior spaces have been based upon velocities not over 1,600 f.p.m.

33m. Considerable work has been designed recently using high velocity distributing ducts—using velocities up to 4,000 f.p.m., this making the ductwork smaller. The smaller ducts take less shaft areas and shallower ceiling depths, with a consequent reduction in the amount of building space needed to house the ductwork. In cases where the temperature requirements of the interior spaces vary because of different types of lighting loads and occupancy, double duct systems (carrying warm and cold air respectively) have been employed, permitting automatic temperature variation and adjustment to the varying room requirements.

33n. It is recommended that in large buildings, these high velocity methods be given serious consideration.

RADIANT COOLING

33o. Another development in air conditioning is radiant cooling; that is, the use of water coils constructed into the ceiling, using warm water in winter for warming the spaces and cool water in summer for cooling. This must be supplemented with an air supply and exhaust system, wherein the air is supplied at the rate of not less than 0.5 c.f.m. per sq. ft., for ventilation purposes. In the summer this air is introduced at about 50° to 52° so as to hold the room dew-point temperature below the temperature of the cool radiant ceiling, thereby preventing condensation at the ceiling. We believe that this type of system will be ultimately developed where it will be more nearly competitive in cost than it is today. While the results obtained with the radiant cooling system have proved to be very good, we cannot yet recommend its use for government buildings.

New Plant Expands Duc-Pac Facilities

EAST LONGMEADOW, Mass.—Now under construction here is a new Duc-Pac plant to produce the firm's line of un-assembled ducts and duct fittings, it was announced recently.

Expanded facilities in the 16,000-sq. ft. raised cement slab building will permit faster production and ease the work flow, the firm stated. The large lot allows for future expansion if needed.

RECTORSEAL No. 2

NEW
but so
Popular!



Introduced to the industry a few short months ago Rectorseal #2 is already preferred by air conditioning men all over the nation. Reason? Quality! For here's a compound that seals positively against leaks on all freon, methyl chloride, sulfur dioxide, ammonia, all lubricating oils and water.

Thin in the tube, Rectorseal #2 spreads smoothly over fine threads, thickens in the joint to a plastic elasticity that prevents leaks—yet is always easy to break-out. With all this Rectorseal #2 costs from 20% to 40% less than other compounds. Write for a generous FREE SAMPLE and see for yourself.

RECTORSEAL, Dept. Z
2215 Commerce Street, Houston 2, Texas

RECTORSEAL
NUMBER TWO

ASPIR-JET SPRAY NOZZLES RAISE TOWER EFFICIENCY

The swirling, atomizing action of the water as it goes through the Aspir-Jet means more effective heat transfer and higher efficiency from any spray-filled cooling tower. Pressure as low as 1/2 pound gives effective water break-up and distribution. Formed of butyrate plastic, Aspir-Jets will not corrode.



* Available through Refrigeration and Air Conditioning Wholesalers.

Manufacturers & Refrigeration Wholesalers: if you are not now using or stocking this outstanding new product, wire or write

THERMAL AGENCY

National Sales Agents
1515 DALLAS • HOUSTON, TEXAS

E-Z-SEE

LIQUID
INDICATOR

NEW FLO INDICATOR FLAP
SHOWS ALL FLOW CHANGES

Analyze flow, function of expansion valve, by means of E-Z to SEE sensitive flap, instantly responsive to variations in flow. Positively leak-proof—hundreds of thousands in use.

Available at Wholesalers everywhere



REMCO
INCORPORATED
ZELLENOPLE, PA.

IDEAL Speed-Freeze PRODUCTS

BEVERAGE COOLERS AND
INSTANTANEOUS DRAFT
BEER COOLERS.
(With Refrigerated Faucets)

WRITE
IDEAL COOLER CORPORATION
2953 EASTON AVE. • ST. LOUIS 6, MO.

CANADIANS! HERE IS A CHANCE TO RETURN HOME!

Leading manufacturer of air conditioning and refrigeration equipment, with very active organization in Canada, wants Application Engineers and Service Engineers for work in Toronto or Montreal. Work primarily on large air conditioning installations not involving unitary type equipment. May consider paying moving expenses. Salary open.

Apply BOX A5421, Air Conditioning & Refrigeration News

YOU
WILL APPRECIATE THE TECHNICAL
SUPERIORITY OF PATENTED, EXCLUSIVE
**SUPERCHARGER
CARBONATORS**

YOUR CUSTOMERS WILL APPRECIATE THE

- Higher carbonation
- Peak capacity
- More troublefree operation
- Space-saving compactness

IT'S EASIER, MORE PROFITABLE TO SELL THE FINEST
Jet foamscent Carbonators by Carbonic Dispenser, U. S. Patent No. 2,588,677

MAIL THIS COUPON TODAY

For literature outlining the opportunity now open to make bigger profits selling Carbonic Dispenser Equipment.

Name _____
Address _____
City _____ State _____



West Coast Plant
1851 Randolph St., Los Angeles, Calif
IN CANADA: GENERAL EQUIPMENT CORP., LTD., TORONTO, ONT.

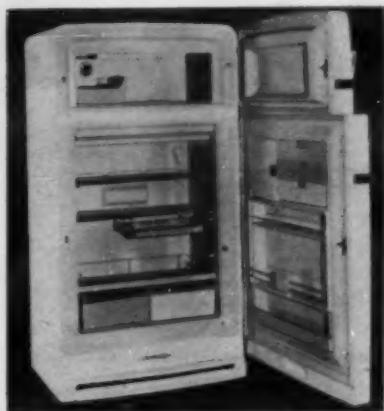
**See HOW MUCH
YOUR DOLLAR
BUYS!**

CATALOG

• REFRIGERATION PARTS
• ELECTRICAL SUPPLIES
• THERMAL AGENCY
• TONING

FREE
Catalog

G&E EQUIPMENT SUPPLY CO.
1001 N. W. 10th St., Chicago, Ill.



Servel Refrigerator Model 1179G.



Servel 'Eldorado' Room Unit

Servel Announces New Lines--

(Concluded from Page 1, Col. 3)

companies and distributors across the nation this month. Richard S. Testut, vice president and general manager of the home appliance sales division, said the development of engineering and design improvement ahead of schedule will enable Servel to make its 1957 refrigerators available this spring.

Styled by Walter Dorwin Teague & Associates, the refrigerator models will have interiors featuring "judiciously-placed, varying-sized rectangles of soft pink, yellow, and blue against a light gray background." This "lends a contemporary-design appearance" to the gas and electric models, the company said.

Top models in both Servel refrigerator lines will also carry the automatic ice-server, which freezes ice cubes without trays, stores them in a container, and automatically replaces them as they are used. In model sizes where the customer had a choice, 60% of Servel refrigerators purchased in the past three years have been equipped with this feature, it was noted.

Among the new features of 1957 Servel refrigerators will be increased food storage capacity and thicker, more spacious doors, "which provide better insulation and improved performance." Seven of Servel's 10 models will have separate-coil two-zone freezing systems.

Other Servel features retained in the new models include automatic defrosting, non-breakable plastic vegetable fresheners, and full-width freezers.

The gas refrigerator line includes two "Automatic Ice-Server" models (1179G and 1079G), a "Space-Wonder" model (1075G), three "Deluxe" models (1178G, 1078G, and 976G), and an apartment model (674G) for contract sale only.

In the electric refrigerator line are two Automatic Ice-Server models (1379C and 1079C) and a Deluxe model (976C).

Model 1179G is a 10.8-cu. ft. two-zone refrigerator with a 2-cu. ft. separate freezer; model 1079G is a 9.7-cu. ft. two-zone refrigerator with a 1.4-cu. ft. separate freezer; model 1075G, a 9.9-cu. ft. two-zone refrigerator with a 1.6-cu. ft. separate freezer; model 1178G, an 11-cu. ft. two-zone refrigerator with a 2.2-cu. ft. separate freezer; model 1078G, a 9.9-cu. ft. two-zone refrigerator with a 1.6-cu. ft. separate freezer; model 976G, an 8.6-cu. ft. refrigerator with a .9-cu. ft. across-the-top freezer; and model 674G, a 6.1-cu. ft. refrigerator with .5-cu. ft. freezer compartment.

Model 1379C is a 12.6-cu. ft. two-zone refrigerator with a 2.2-cu. ft. separate freezer; model 1079C, a 9.9-cu. ft. two-zone refrigerator with 1.7-cu. ft. separate freezer; and model 976C, an 8.6-cu. ft. refrigerator with 1.2-cu. ft. across-the-top freezer.

Six models (1179G, 1079G, 1178G, 1078G, 1379C, and 1079C) provide automatic defrosting, and two models (976G and 976C) pushbutton automatic defrosting.

Suggested list prices are:

GAS REFRIGERATORS

Automatic Ice-Server Models

1179G \$619.95

1079G 549.95

Space-Wonder Model Series

1075G 369.95

Deluxe Series

1178G 569.95

1078G 499.95

976G 369.95

Apartment Series

674G No suggested list

ELECTRIC REFRIGERATORS

Automatic Ice-Server Series

1379C \$579.95

1079C 479.95

Deluxe Series

976C 279.95

Completely restyled by Larry Haase, noted Detroit designer, the Servel room air conditioner line includes standard ("Custom") units in $\frac{3}{4}$ and 1-hp. sizes and deluxe ("Eldorado") units in $\frac{3}{4}$, 1, and $1\frac{1}{2}$ -hp. sizes.

The 1956 units have greater cooling capacity and air flow, the company stated. Quiet operation is said to be assured by spring mounting, rubber cushioning, cabinet insulation, and a centrifugal-blower fan.

All Servel models can be mounted in any window position—(1) flush with draperies, (2) on centerline of cabinet, (3) with back of unit flush to outside wall, or (4) at any intermediate point. They are also easily adaptable to built-in or through-the-wall installations.

Each of the five Servel chassis fits the same cabinet.

Eldorado models have a six-pushbutton control, the positions being "off," "full cool," "ventilating," "automatic cool," "night cool," and "cool and ventilating." A thermostat controls temperatures automatically in the three last-named positions. Custom model controls have three pushbuttons.

The Servel conditioners are styled in tropical beige and Hawaiian sand colors which will harmonize with either modern or traditional furnishings. Each model has an over-all width of 25 $\frac{3}{4}$ in.

Suggested retail prices (not installed) are as follows:

ROOM AIR CONDITIONERS

Custom Series

96S-1, $\frac{3}{4}$ hp. 115 V. \$289.95

126S-1, 1 hp. 230 V. 229.95

Eldorado Series

96-1, $\frac{3}{4}$ hp. 115 V. 239.95

126-2, 1 hp. 230 V. 369.95

156-2, $1\frac{1}{2}$ hp. 230 V. 409.95

Marts--

(Concluded from Page 1, Col. 5)

display setups for the dealers, and most of the firms offering conditioner lines are offering "buy-back" or "price protection" plans for dealers who will place orders ahead of the season.

Also, firms such as Gibson, Amana, and O. A. Sutton have "residential" air conditioners aimed at cooling small homes or more than a single room in larger homes, and designed for easy installation. There were also more adaptations for "through-the-wall" room air conditioner installations.

Whirlpool-Seeger, in addition to showing the complete new line of RCA Whirlpool room air conditioners, also showed an upright and a chest food freezer, as prototypes of a freezer line which is scheduled to be in production later this year.

There was the usual outcropping of rumors of mergers and "take-overs," some of which were published (not in the NEWS), and none of which seem to have any foundation at this time. These included:

1. That Westinghouse, which is introducing this year a full line of room air conditioners of its manufacture, will abandon this plan because of the labor situation and offer a line made by another producer. This was denied categorically by H. F. Hildreth, head of the Westinghouse department which produces and merchandises room air conditioners.

2. That the Ford Motor Co. would buy and operate the Crosley-Bendix Div. of Avco Mfg. Corp. This was denied by both Ford and Avco.

3. That Hotpoint will produce and merchandise TV and radio receivers. Hotpoint officials who were contacted declared that they had heard nothing of any such plan.

Manufacturers Predict Big Year for '56

CHICAGO—"You can just sense that this is going to be a good sales year—maybe the best in history for our industry," said W. F. Switzer, merchandising manager for Frigidaire, as he watched the buyers flow through the exhibits at the marts.

"Response to the new lines has been great, and we are setting high goals for every product in our line."

The prediction that more major electric appliances will be sold in 1956 than in any previous year, and that 1957 will be even better, was made by Bernard A. Chapman, vice president and general manager of the Kelvinator Div., American Motors Corp., at ceremonies opening Kelvinator's new display space in the Merchandise Mart.

Chapman said his firm's estimates, based on industry sources, are that 15,755,000 major appliances (refrigerators, freezers, ranges, home laundry equipment, water heaters, room air conditioners) will be sold in 1956, for a 6% increase over 1955's estimated total of 14,830,000 units. Sales in 1950, the best previous year, totaled some

15,111,000 major appliances.

Factors favoring a long-term increase in the appliance business, Chapman said, are the obvious basic ones of increasing population, rising rate of family formations and births, heavy capital spending for expansion by industry, and sustained high level of disposable consumer income.

SOME TROUBLE SPOTS SEEN

"For 1956 as always there will be some trouble spots," Chapman said, "but the general picture is good. Gross national product is on the increase and we can look for continued government spending as a sustaining influence. Although the amount of instalment credit outstanding indicates that more Americans extended themselves further in 1955 than ever before, it is not excessive in relation to disposable income."

MORE MONEY FOR APPLIANCES

"The chief impact of the higher long-term credit situation will be on the automobile industry, since many every-year traders may have to hang on to their new cars for an additional year. Consumer spending on cars will drop in 1956, but more money will be available for appliances and other durable goods."

Walter Jeffrey, vice president in charge of sales for Kelvinator, reported that one of the highest December sales totals in its history was recorded by the firm last month, with billings to dealers 33% higher than the same month a year ago. It was the 11th consecutive month in which sales were above the comparable 1954 period, and the best December record since 1948.

With sales of the Hotpoint Co. in 1955 setting an all-time peak, with an average rise of about 30%, the company is shooting for another 30% increase in 1956, said John C. Sharp, company president. Hotpoint ended the year with no inventory and orders are running higher than a year ago, and production schedules are being increased to meet the demand.

Although major appliance sales set a new industry record during 1955, they should be even 9% higher in 1956, C. W. Theleen, manager of customer relations, appliance and TV receiver division, General Electric Co., predicted at a marts press conference.

"In at least six lines, new records will be set and 1956 will be the best electric major appliance sales year in history," he declared.

'55 SALES 22% BETTER THAN '54

Theleen said that some 14 million major appliances were sold during 1955. This was some 22% better than in 1954, he declared. New sales records were set by room air conditioners, dishwashers, disposers, electric dryers, and automatic washers, he stated.

Theleen also asserted that two-temperature combination refrigerator-freezers now lead the industry in sales.

He called attention to four trends now apparent in the major appliance industry. They are (1) the increasing acceptance of built-in appliances, (2)

the quick acceptance of color in major appliances, (3) the quick growth of the package kitchen concept (combining nearly everything needed for the kitchen-laundry in a single internally plumbed and wired unit), and (4) the development of the electronic oven.

The housewife "probably will have her choice of several electronic ovens before the end of 1956," he predicted.

COLORED APPLIANCES

Theleen said he had no industry figures on the growth of colored appliances. But, he said, 17 to 18% of General Electric's total major appliance production is in color. "It has been this way for some months," he commented.

He said the percentage of production varied between different appliances. For refrigerators, about 10% are produced in color, he noted.

Colored appliances now are priced only about 5% higher than white appliances, he said.

Theleen admitted that the introduction of colored appliances has presented problems at all levels of distribution. But, he declared, "we felt that the market is ready for color and went ahead into it."

Kain Named--

(Concluded from Page 1, Col. 2)

background of over 20 years in the refrigeration field. He joined the Koch organization in 1934 and has had experience in most phases of the company operation, including engineering, purchasing, and costs, and has traveled extensively in supervising the firm's sales program.

After three years in the military service and a brief period with an air conditioning firm in St. Louis, he returned to Koch, and in 1953 was appointed sales manager.

Kahlert--

(Concluded from Page 1, Col. 2)

formerly associated with Trane Co. and McQuay, Inc.

R. R. Forseille will assume the responsibility of the factory operation and supervise the company's purchasing in the capacity of vice president in charge of production. Forseille also will handle the planning and construction of the new BAC factory to be built on a 20-acre plant site recently acquired.

NOLIN

Leads the Field!

New Dry Beverage Cooler

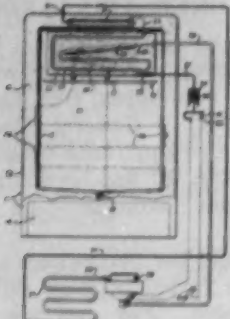
- LEADS IN CAPACITY
- LEADS IN QUALITY
- LEADS IN PERFORMANCE
- LOWEST IN PRICE

NOLIN MANUFACTURING COMPANY
1405 LLOYD ST. PH. LD. 37
MONTGOMERY, ALABAMA

PATENTS

Week of Sept. 6
(Concluded)

2,716,967. REFRIGERATING APPARATUS. James W. Jacobs, Dayton, Ohio, assignor to General Motors Corp., Detroit, Mich., a corporation of Delaware. Application July 2, 1953, Serial No. 365,592. 9 Claims. (Cl. 62-4.)



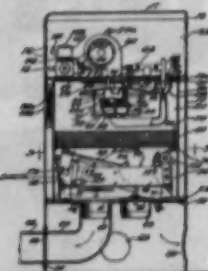
9. In a closed refrigerating system having a single evaporator, refrigerant liquefying means and means for supplying liquid refrigerant from said liquefying means to said evaporator, said last named means including a pressure reducing means, a non-refrigerating flash back chamber interposed in said closed system intermediate said single evaporator and said pressure reducing means, insulating material completely surrounding said flash back chamber to isolate the same from ambient temperatures thereabout, thermostatic means directly responsive to a temperature of said single evaporator below freezing for stopping said refrigerant liquefying means, said thermostatic means also being directly responsive to a temperature of said single evaporator above freezing for starting said refrigerant liquefying means, and said insulated non-refrigerating flash back chamber automatically receiving liquid refrigerant from said single evaporator in response to said thermostatic means stopping said refrigerant liquefying means for permitting the temperature of said evaporator to rise above 32° F.

2,716,572. VENTILATED CONTAINER SYSTEM OF TRANSPORTATION. Ellis W. Test, Hinsdale, Ill., assignor to Pullman-Standard Car Mfg. Co., Chicago, Ill., a corporation of Delaware. Application Dec. 31, 1948, Serial No. 68,685. 2 Claims. (Cl. 62-171.)



2. A method of maintaining lading in refrigerated condition during transportation thereof, which comprises disposing lading in a ventilated pilferage-preventing container having a heat-insulating base, conveying the container with the lading therein to a point en route in a refrigerated vehicle while refrigerating the lading by subjection to the temperature of the atmosphere of said vehicle, disposing a heat-insulating hood on said base over the lading container and the refrigerated vehicle atmosphere adjacent thereto at said point, transferring to an unrefrigerated vehicle the lading in the container and refrigerating atmosphere enclosed by the hood and base for conveyance from said point, and maintaining the lading under refrigeration by said atmosphere in the hood and base while conveying the lading in the unrefrigerated vehicle.

2,717,060. ROOM DEHUMIDIFIER. James G. Ames, Aurora, Ill. Application Nov. 28, 1951, Serial No. 268,047. 21 Claims. (Cl. 123-4.1.)



19. In a room dehumidifier having a casing which contains a pervious bed of solid hygroscopic material in combination with means to circulate a stream of air from a room through said bed and heater means for heating said stream of air before it reaches said bed; automatic means for causing said dehumidifier to pass through a continuous series of dehumidifying and regenerating cycles, comprising: a compartment into which said stream of air passes after passing through said bed; a return valve in said compartment to control the flow of the stream of air into a room; an exhaust valve in the compartment to control the flow

of the stream of air to a stack; means for opening said valves alternately; temperature responsive means in said compartment causing said exhaust valve to open at a predetermined low temperature; means to start said heater simultaneously with the opening of said exhaust valve to start a regenerating cycle; temperature responsive means in said compartment to stop said heater at a predetermined high temperature in said regenerating cycle; temperature responsive means to close said exhaust valve at a predetermined temperature between said low and said high to start a dehumidifying cycle; and holding means to permit said exhaust valve to close only during a period of descending temperature in said regenerating cycle.

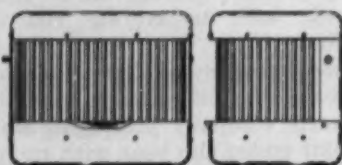
2,717,189. REFRIGERATOR SHELVES. Walter D. Teague, Annandale, N. J., and Seymour D. Wassing, Brooklyn, N. Y., assignors to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Jan. 31, 1952, Serial No. 289,223. 3 Claims. (Cl. 312-351.)



1. In a refrigerator having a liner bounding a food storage compartment, a plurality of shelf supports arranged in vertical spaced relation on different walls of said liner and a stepped shelf supported on said shelf supports, said plurality of shelf supports including supports on one wall of the liner in the same horizontal plane as supports on another wall thereof, and said stepped shelf including a plurality of horizontal supporting surfaces of different widths arranged in different horizontal planes and connected by vertical connecting means into a unitary shelf structure of substantially the same width as the width of said compartment, the height of said vertical connecting means being substantially the same as the vertical spacing of said plurality of shelf supports, and said stepped shelf being reversible end-for-end and top-for-bottom relative to said shelf supports and to said compartment from certain shelf supports located in two certain horizontal planes to other shelf supports located in the said two horizontal planes.

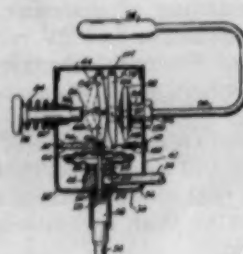
DESIGNS

175,518. EVAPORATOR COOLER. Thomas B. Martin, Pacific Palisades, Calif., assignor to Harry S. Guthalt, Los Angeles, Calif. Application Feb. 7, 1955, Serial No. 34,392. Term of patent 14 years. (Cl. D62-4.)



Week of Sept. 13

2,717,404. REFRIGERATING APPARATUS. Ralph W. Doeg, Detroit, Mich., assignor to Nash-Kelvinator Corp., Detroit, Mich., a corporation of Maryland. Application Jan. 13, 1954, Serial No. 403,942. 3 Claims. (Cl. 62-3.)

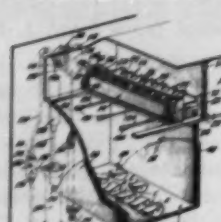


3. In a refrigerant flow control device having a valve member movable in one direction by a manual actuator and in the opposite direction by a thermostat, mechanism for operatively connecting the valve member to both the manual actuator and the thermostat comprising, a lever for actuation respectively by the manual actuator and thermostat, a second lever to actuate the valve, and a link connecting the free ends of said levers together forming therewith an abutment for engaging by either the manual actuator or thermostat and a second abutment for engaging the valve.

2,717,495. ICE MAKER. Sven W. E. Andersson, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Jan. 11, 1951, Serial No. 265,519. 43 Claims. (Cl. 62-4.)

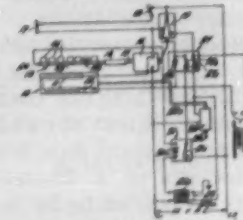
1. An ice maker comprising an ice mold having an arcuate contour, a freezer for congelating water in the mold, power mechanism operative to cause relative turning movement between the mold and an ice piece formed

therein to remove the ice piece from the mold, and a control device operative responsive to the formation of



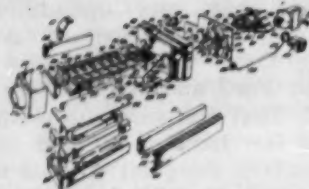
the ice piece to instigate operation of the turning mechanism.

2,717,496. ICE MAKING APPARATUS. Sven W. E. Andersson, Buffalo, N. Y., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Dec. 10, 1952, Serial No. 325,147. 25 Claims. (Cl. 62-4.)



1. In an automatic ice maker, an ice mold, means for filling the mold with water, means for freezing the water, means for removing the ice from the mold, and means for controlling the filling and removing means, said control means including a plurality of electric circuits having a first switch therein movable to a first position for energizing the removing means and movable to a second position for deenergizing the removing means and for energizing the filling means, and said plurality of circuits including a first relay circuit having a holding relay therein that is energized when the first switch is in the first position and which holding relay is connected in said plurality of circuits in a manner as to remain energized when the first switch is moved to the second position.

2,717,497. ICE MAKER. Carl J. Knerr, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Sept. 15, 1954, Serial No. 456,106. 19 Claims. (Cl. 62-104.)



1. In an automatic ice maker, an ice mold, electrically-operated means for filling the mold with water to be frozen, refrigerating means for freezing the water in the mold, an ejector mechanism including an electric motor for removing ice from the mold and for thereafter energizing said filling means, said electric motor having an overload limit switch in a circuit thereof, and said electric motor and said electrically-operated filling means being wired in an electric circuit with said overload limit switch in a manner as to deenergize both the electric motor and the electrically-operated filling means upon the opening of said limit switch.

2,717,498. ICE MAKER. Harry C. Shagoloff, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Dec. 10, 1952, Serial No. 325,097. 38 Claims. (Cl. 62-6.)



1. An automatic ice maker including an ice mold having a plurality of ice forming compartments, refrigerating means for forming ice in said compartments, means associated with one of said compartments for retarding the formation of ice in said one compartment, and means incorporated in said ice maker and operative responsive to the formation of ice in said one compartment for discontinuing the operation of the refrigerating means.

2,717,499. ICE MAKER. Carl T. Ashby and Benjamin A. Phillips, Evansville, Ind., assignors to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Dec. 10, 1952, Serial No. 325,186. 8 Claims. (Cl. 62-6.)

1. A refrigerator having a freezing compartment bound by a plurality of walls and forming a space for the preservation of food, an open top ice mold within said compartment below a top wall thereof, means for freezing water into ice in the mold and for chilling the walls of said compartment below the freezing temperature of water whereby frost is collected thereon, and means operable responsive to

Government Contracts

SYNOPSIS OF PROPOSED PROCUREMENT

ARMY

General Stores Supply Office, 700 Robbins Ave., Philadelphia 11, Pa.

TERMINAL, VENTILATING DUCT. Spec Bushings Drawing S3801-090702, ALT C-1560 ea.—IFB NEG 155/145002F/56Q—Bid Opening 23 Jan 56.

NAVY

Navy Purchasing Office, 4th & Independence Ave., Washington D. C. Attn: SPF-1A.

REFRIGERATOR MECHANICAL counter top self-contained 115 V AC single phase 60 cycle capacity 4 cu. ft. per spec MIL-R-19003 (Ships) dated 15 Aug 55 with modifications indicated in invitation—20 ea.—IFB 600-700-56-S—Bid Opening 31 Jan 56.

FROZEN FOOD CABINET Type III 16 cu. ft. capacity for operation on 115 volt single phase 60 cy. AC, per spec MIL-R-1834B dated 2 July 1954 and Amendment No. 1 dated 8 Oct 1954 with additional modifications as indicated in the invitation—35 ea.—IFB 600-709-56-S—Bid Opening 31 Jan 56.

The following items are under IFB 600-492-56-S—Bid Opening 31 Jan 56.
WATER COOLING COIL CHILLED TYPE A sizes 41 DW thru 46 DW, 181 ea.—**COOLING COIL TYPE A** sizes 42 thru 46, 30 ea.—**GRAVITY COIL** sizes 3G and 5G, 69 ea.—**CHILLED WATER UNIT COOLER TYPE B** sizes 41 UW thru 45 UW with 115 V AC Motor, 110 ea. per spec MIL-A-2939B dated 27 Aug 1953 and Amend 3 dated 15 Nov 1955 with modifications indicated in invitation. The material under this specification is of a type on the qualified products list.

Naval Supply Depot, Great Lakes, Ill., Purchasing Dept.

DOMESTIC REFRIGERATOR, 9 cu. ft. Righthand Door 1/2 HP. Brushless Type Self Oiling, 1750 RPM, 115 V, 60 Cycle Motor. Equal to Westinghouse Model DSG-91—351 ea.—IFB-128-38-56—Bid Opening 31 Jan 56.

Commandant of the Marine Corps, Washington, D. C., Code (CSG).

WAREHOUSES, REFRIGERATION, PREFABRICATED, Sectional, walk-in portable, Type I, size 600, Class I, in accordance with Mil Spec MIL-W-1092D Amend I with exceptions—58 ea.—IFB 157B—Bid Opening 3 Feb 56.

GENERAL SERVICES ADMINISTRATION

General Services Administration, Region IV, 50 Seventh St., N.E., Atlanta, Ga.
AIR CONDITIONING FOR COURT ROOM, Spartanburg, S. C. Post Office and Court House—Job—IFB CR4-1179—Bid Opening 1-24-56.

General Services Administration, Business Service Center, Region 3, 7th & D Sts., S.W., Washington 25, D. C.

AIR CONDITIONING, Federal Office Bldg. No. 1, Wing 3, Fourth Story, 3rd and D Sts., S.W., Washington, D. C.—Job IFB GS-R3-B-3555—Bid Opening 1-27-56.

General Services Administration, Region 4, Business Service Center, 50 Seventh St., N.E., Atlanta, Ga.

AIR CONDITIONING FOR COURT ROOM AND JUDGES' SUITE, Raleigh, N. C. Post Office and Court House—Job—IFB CR4-1203—Bid Opening 1-31-56.
AIR CONDITIONING FOR COURT ROOM AND JUDGE'S CHAMBERS, Greensboro, N. C. WV Post Office and Court House—Job—IFB CR4-1200—Bid Opening 2-1-56.

CONTRACTS AWARDED THROUGH JANUARY 10, 1956

General Services Administration, Region 5, 219 S. Clark St., Chicago, Ill.

Water Coolers—36 ea.—\$11,681—Sunroc Corp., Glen Riddle, Pa.

Water Coolers—154 ea.—\$20,703—Sunroc Corp., Glen Riddle, Pa.

General Services Administration, 1114 Commerce St., Business Service Center, Dallas, Texas.

Air Conditioning Court Room, Post Office and Court House, Beaumont, Texas. (IFB CR7561-103)—Job—\$11,200—Air Comfort, Inc., 3865 College, Beaumont, Texas.

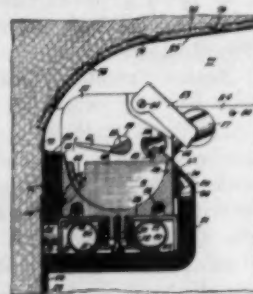
Officer in Charge of Construction, Public Works Office, Fifth Naval District, Norfolk 11, Va.

Rehabilitation of Cold Storage Building No. 680, Naval Training Center, Bainbridge, Md. (IFB NOY-91300)—Contract—\$302,000—Lieb Construction Co., Inc., 389 Lexington Ave., New York, N. Y.

Chicago QM Purchasing Center, U. S. Army, 1819 West Pershing Rd., Chicago 9, Ill.

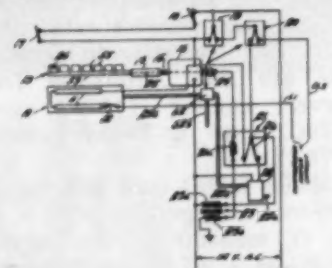
Refrigerators, Mechanical, Household, Type I, Size 12 (12 cu. ft. capacity), one door hinged, left and right hand side (IFB 56-143(B)—305 ea.—\$46,936—Frigidaire Sales Corp., 300 Taylor St., Dayton 1, Ohio.

the freezing of water in the mold for defrosting at least one of the walls of said compartment.



electric switch movable to one position by the ejectors mechanism for deenergizing the ejector mechanism, for energizing the heating means and for deenergizing the refrigerating means, means operable responsive to the thawing of ice free of the mold for reenergizing the ejector mechanism, means operable responsive to movement of the ejector for operating the filling means, and said second electric switch being movable to a second position by the ejector mechanism for deenergizing the ejector mechanism and for reenergizing the refrigerating means.

2,717,501. ICE MAKER. Sven W. E. Andersson, Buffalo, N. Y., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Dec. 10, 1952, Serial No. 325,145. 27 Claims. (Cl. 62-7.)



1. An ice maker comprising an ice mold having a generally arcuate contour, a freezer for congelating water in the mold, means for loosening an ice piece formed in the mold, power mechanism including an electric motor operative when energized to cause relative turning movement between the mold and the ice piece formed therein to remove the ice piece from the mold, said electric motor being so constructed and arranged as to stall while energized pending the loosening of the ice in the mold and to cause the relative turning movement immediately the ice is loosened, and a control device operative responsive to the formation of the ice piece to instigate operation of the power mechanism.

(To Be Continued)

Servicing Automobile Air Conditioners

BY C. DALE MERICLE

This is the second instalment describing the air conditioning system employed by American Motors Corp. in its Nash automobiles.

Makes previously discussed in this series, which began in the June 13 issue, have included A.R.A., Frigikar, Automotive Air Conditioning, Pivot, Novi, Oldsmobile, Buick, Pontiac, Chevrolet, and Ford.



FIG. 4—Two knobs to left of steering column control cowl ventilator and defroster damper in 1954 system.



FIG. 5—Air conditioner-heater control as used on 1955 Nash "Rambler" series. Note ventilator and defrost control knobs below.

NASH (2)

American Motors Corp.
14250 Plymouth Rd.
Detroit 32, Mich.

Controls

Operation of the Nash air conditioning system on both cooling and heating cycles is controlled by a single control knob located on the instrument panel.

The knob slides from left to right to control a water valve and thus turn the heating system on or off as well as to set the amount of heating required. Rotating the knob turns on the blowers at low or high speeds and also energizes or de-energizes the electrical circuits feeding the magnetic clutch on the compressor and the thermostat-solenoid by-pass valve employed on the Nash system.

With the control knob pushed toward the right for heating, it can then be rotated clockwise for fan operation. At the first position fans operate at low speed. Turned fully clockwise, the knob sets the fans for high speed operation.

Located in the instrument panel near the steering column is the damper control arrangement to permit setting of dampers into proper position for air conditioning, heating, ventilating, and windshield defrosting.

Two push-pull damper control knobs are employed on 1954 models (Fig. 4) and the 1955 Rambler series (Fig. 5). A single sliding damper control lever is used on 1955 Ambassador and Statesmen models (Fig. 6).

On all models, to obtain summer air conditioning, the main control knob is pushed all the way to the left and turned counter-clockwise. This turns on the blower(s)—low speed at first position, high speed at second position—and energizes the electrical circuits of the cooling system. These include the magnetic clutch and the thermostat and solenoid by-pass valve circuit.

On 1954 models, for air conditioning both damper control knobs are pushed all the way in.

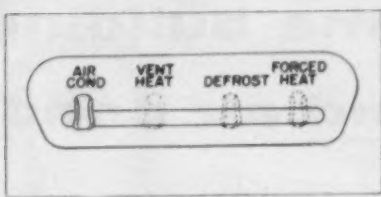


FIG. 6—Damper controls are combined in a single, sliding lever in 1955 Nash "Ambassador" and "Statesman" models.

On 1955 Ambassador and Statesman models, the damper control is pushed all the way to the left for air conditioning.

For air conditioning on 1955 Rambler models, the left damper control knob is pushed in to open the air recirculating damper and the right damper control knob is pulled out to close the cowl vent damper and the evaporator shroud air outlet door.

The thermostat is located on top of the evaporator housing with the bulb being in the coldest section of the evaporator. On 1954 models and on the 1955 Ambassador and Statesman models the thermostat is set to cut in at 37° F. and cut out at 32° F. Cut-in and cut-out settings on the 1955 Rambler unit are 39° F. and 34° F., respectively.

(To Be Continued)

Kinetic Ups Thomas To District Post In Los Angeles

WILMINGTON, Del.—Robert E. Thomas, Jr. has been named office manager for Kinetic Chemicals Div. in the Los Angeles district of the Du Pont Co.'s Organic Chemicals Dept.

The post is a new one and the second district office position set up in the last six months by Kinetic to provide increased service and technical assistance for west coast users of its "Freon" refrigerants, aerosol propellants, fire extinguishing agents, and solvents.

Thomas was graduated from the University of Virginia in 1935 and joined Du Pont two years later as a cost clerk in the Wilmington office of its Organic Chemicals Dept. He was transferred to the Kinetic Chemicals Div. as senior clerk in 1945 and for the last five years has been assistant section manager.

Welbilt Room Unit Line--

(Concluded from Page 1)

Here are the highlights of the new Welbilt 1956 line:

1. Lower prices at both list price and dealer cost levels.
2. Larger assortment with nine principal models, including three different $\frac{3}{4}$ -hp. units.
3. A new 2-hp. model.
4. A $\frac{3}{4}$ -hp. air conditioner rated at 7.5 amps. "that may be used as a 'plug-in' unit in many areas of the country."
5. Completely redesigned interior chassis arrangement.

QUIET-GUARD OPERATION EXPLAINED

In explaining the operation of the new Quiet-Guard, which will key the company's merchandising program, Howard Landis, sales manager of the Welbilt Air Conditioning Div., said that the device is essentially a facedamper applied at the evaporator outlet.

With Quiet-Guard control open, the unit will produce maximum cooling with normal air circulation, it is claimed.

Closing the Quiet-Guard, however, places an insulated barrier across a large area of the grille opening. This produces a marked quieting effect on air noise, Landis said.

"Since a single speed fan motor is used, restricting the size of the grille opening, increases the air speed leaving the grille three times," it was stated. "The effect of this is to produce better cool air circulation in the room."

"Finally, the partial restriction of the air flow decreases the air flow across the evaporator, thereby improving dehumidification."

Prices of the new line are as follows:

DELUXE MODELS		
Model	hp.—115 V.	Recommended Retail Price
665— $\frac{3}{4}$	hp.—115 V.	\$299.95
667— $\frac{3}{4}$	hp.—115 V., 7.5 amps	349.95
CUSTOM MODELS		
675— $\frac{3}{4}$	hp.—115 V.	319.95
690—1	hp.—230 V.	329.95
668—1	hp.—208 V.	329.95
6150—1 $\frac{1}{2}$	hp.—230 V.	399.95
6158—1 $\frac{1}{2}$	hp.—208 V.	399.95
6200—2	hp.—230 V.	459.95
6208—2	hp.—208 V.	459.95

All units in the 600 Series have the same size cabinet with interchangeable and easily removable chassis, it was pointed out. These are the $\frac{3}{4}$ and 1-hp. models. They are 22 $\frac{1}{2}$ in. wide and 16 $\frac{1}{2}$ in. high.

Models in the 6000 Series are 1 $\frac{1}{2}$ hp. and the new 2-hp. unit. They are 26 $\frac{1}{2}$ in. wide and 19 in. high.

'SILL-SLIM' DESIGN

All models have the company's "Sill Slim" design and can be mounted flush to the window ledge. They feature "warp-proof, unbreakable" steel fronts with plastic trim. On all models the filter is accessible without removing the entire front panel of the unit, the company said.

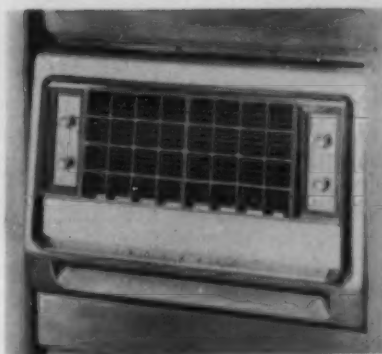
Thermostats are standard equipment in all models, as is fresh air and exhaust control. All but two models, the #665 and #667, have electric heating units.

The new 7.5-amp., $\frac{3}{4}$ -hp. unit delivers more B.t.u. capacity at less operating cost than its previous $\frac{1}{2}$ -hp. units, the company said, adding: "A unit of this kind uses less current than such appliances as toasters,

broilers, or portable heaters found in almost every home."

The 2-hp. model utilizes a single compressor. It can be used not only in homes but also in commercial and industrial applications, the company indicated.

Welbilt has eliminated the $\frac{1}{2}$ -hp. model from its line. The company is offering instead a smaller capacity $\frac{3}{4}$ -hp. standard unit without heater but with a thermostat to sell at the price level of the former $\frac{1}{2}$ -hp. model. This unit, which can also be



WELBILT "Quiet-Guard" air conditioner, Series 600.

used as a $\frac{3}{4}$ -hp. price leader, has a recommended retail price of 299.95, it was stated.

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$7.50 per insertion. Limit 50 words. 15¢ per word over 50.

RATES for all other classifications \$10.00 per insertion. Limit 50 words. 20¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other address by actual word count. Please send payment with order.

POSITIONS WANTED

EXPERIENCED AIR conditioning engineer, mechanical graduate, majored in refrigeration, heating, and ventilating. Broad field background training others in air system design, chilled water system design, sale, installation, trouble shooting and service on residential, commercial and industrial installations. Age 43. Thorough experience with gas and steam-actuated absorption refrigeration units, direct air cooling and water chilling types. Experience working with distributors, contractors and utilities. Can engineer, sell, service, supervise. Will relocate. Early reply desired. BOX A5427, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

WANTED—MANUFACTURER'S representative calling on refrigeration jobber and user trade to sell Rectorseal #2, the positive leak preventer. See our ad on page 32. Many territories open, large number of job accounts already established. This item offers the aggressive commission agent already carrying refrigeration lines excellent profit possibilities. For additional information write, giving brief outline of your company, including lines now handled, territory covered, and references. RECTOR WELL EQUIPMENT COMPANY, INC., 2215 Commerce Street, Houston 2, Texas.

PROJECT ENGINEER—Capable of handling product from original design into production. Minimum 5 years' experience air conditioning or refrigeration products. Sheet metal product design and manufacturing experience desirable. Cost consciousness, manufacturing know-how and ability to cooperate with and assist other departments is essential. College graduate preferred. Salary commensurate with education and experience. REMINGTON CORPORATION, Auburn, New York, Attn: A. E. Relas, Director of Engineering.

FACTORY BRANCH location in Chicago has openings in service department for appliance servicemen and one or two supervisors. Best working conditions. Please submit brief outline of experience to BOX A5416, Air Conditioning & Refrigeration News.

ENGINEERING GRADUATE with a background of refrigeration experience, capable of handling a project from development into production. Opportunity for man of proven ability to grow with expanding Midwest manufacturer of refrigeration and accessory equipment. Preferred age, 30-35 with a minimum of five years' experience in refrigeration equipment design. Our employees know of this ad. Write BOX A5417, Air Conditioning & Refrigeration News.

PRODUCT DEVELOPMENT engineer wanted by established Midwestern manufacturer of refrigeration and industrial valves and accessories. Engineering degree desirable but not required. However, a knowledge of hydraulics and thermodynamics is important. Excellent working conditions and benefits. Salary open. Applicant should state education, experience and salary desired. BOX A5418, Air Conditioning & Refrigeration News.

DISTRIBUTORS AND manufacturer's representatives wanted to carry Rovon All-Electric truck refrigeration units for dairy, meat and other local and regional delivery trucks. Several valu-

able territories open for Rovon All-Electric refrigeration units and Certified-Air dairy and beverage cases and air conditioners. Write BOX A5423, Air Conditioning & Refrigeration News.

FIELD ENGINEER—a technical graduate or equivalent, 25 to 32 years of age with experience in refrigeration and air conditioning, required to call on contractors, wholesalers, and manufacturers in Pittsburgh-Cleveland area. After a factory training program, very interesting work awaits you. Remuneration based on liberal salary, bonus and expenses. Write BOX A5424, Air Conditioning & Refrigeration News.

WANTED—TWO district managers: One to be located in Metropolitan New York area and one in San Francisco. To supervise sales offices of prominent manufacturer of heating, cooling, and air conditioning equipment on East and West Coast areas. Send complete resume of education, experience, and salary requirements to BOX A5426, Air Conditioning & Refrigeration News.

AIR CONDITIONING sales engineer in Maracaibo, Venezuela with established U. S. firm well known in the air conditioning industry, handling packaged and large central plant equipment. Knowledge of Spanish desirable. Excellent remuneration for qualified engineer. Furnish picture, personal data, references, and details of engineering background. BOX A5480, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

NAMEPLATES—SPECIALLY manufactured for air conditioning and refrigeration requirements. Use these low-cost $2\frac{1}{2}$ " x $\frac{3}{4}$ " metal nameplates for labeling and identifying your installations. Over 150 standard refrigeration and air conditioning wordings available for immediate shipment. No minimum order required. Free samples, quotations, 1956 Catalog available covering metal or engraved Bakelite nameplates worded as you specify. Numbered valve tag information included. SETON NAMEPLATE CO., Dept. AC5, 394 Central Ave., New Haven 15, Conn.

AUTOMOTIVE AIR conditioning blower assembly: Welded pressed steel housing, rubber mounted for smooth quiet operation. 4" air inlet 3" air discharge. 6 volt d.c. motor 1600 r.p.m. 150 c.f.m. 9" H x 8" W x $3\frac{1}{4}$ " D. \$6.95 ea. Lots of ten \$6.50. Send for free circulars on refrigeration values. WALTER W. STARR, 2833 Lincoln Ave., Chicago 13, Illinois.

AVAILABLE FOR immediate delivery substantial quantity 1950 well-known brand hermetically sealed condensing units $\frac{1}{4}$ hp., 115 volts, 50/60 cycles, complete with freezer type evaporator —\$23.00 each. BOX A5423, Air Conditioning & Refrigeration News.

BUSINESS OPPORTUNITIES

NEW YORK City and vicinity: Wanted —Purchase or partnership of refrigeration and air conditioning service department operating at a loss with organization specializing in sales. Owner's interest protected. All details held in confidence. WRITE BOX A5428, Air Conditioning & Refrigeration News.

MISCELLANEOUS

MAROCAN SOCIETY refrigeration specialist seeking representation throughout Morocco of American brands of refrigeration equipment. Address: S. A. T. M. O. 15, rue du Vignemale, Casablanca, Morocco.

TEL-AVIV, ISRAEL: Sales and application engineer revisiting Holy Land during month of March. Will undertake commissions for negotiations of projects, equipment applications, or sales representations, or any similar undertaking. Returning middle of April. BOX A5429, Air Conditioning & Refrigeration News.

702 Homes--

(Concluded from Page 1, Col. 4)
tract as the air conditioning industry's "major breakthrough into the volume housing market."

"The Levitt decision to make air conditioning standard equipment will have a profound effect on the entire home building industry," he said. "It may well establish central air conditioning as a 'must' for all volume builders in the future."

Air conditioning will be installed in all Country Clubber homes to be built in Levittown, Pa., "the nation's biggest planned community." Initial occupancy will begin this spring.

The new air conditioned Country Clubber-Weathermakers will be built and occupied at the rate of about five a day, starting in the spring. Orders for these homes will be taken on a first-come, first-served basis.

"This new point of view is adding to the value and saleability of houses that have air conditioning. The new Levitt program announced recently will, I am sure, accelerate the trend. Since 1952 total installations in homes have increased eight-fold, and I predict that within a decade they will be as common as is the furnace in the new home today."

The new Country Clubber-Weathermakers will be built on an average of two plots to the acre in the Middletown section of Levittown, a wooded area of gently rolling hills and streams. The large houses with their spacious rooms and built-in electrical appliances are considered by the Levitt firm to be the finest the company has ever built.

The air conditioning equipment in the new homes consists of an air-cooled refrigerating unit, requiring no water, located on the floor in one corner of the attached two-car garage and connected to an air conditioning unit suspended overhead.

Within the house conditioned air is provided through ceiling diffusers in the kitchen, living room, and dining room, and from grilles over the doorways into the three ground-floor bedrooms. Sufficient capacity is provided and ductwork laid out to handle all future air conditioning requirements for the expansion second floor, where two more rooms and a third bath may be finished.

The Country Clubber homes will be heated by hot water with an oil-fired radiant heating system.

It was estimated that cooling costs for the cooling season would average from \$60 to \$75, while heating costs, depending on the temperature, would range from \$150 to \$200.

The completely pre-planned community of Levittown, which will soon become the tenth biggest city in Pennsylvania, is now rapidly nearing completion. It occupies a site of eight square miles at the big bend of the Delaware River just north of Philadelphia.

The first families arrived in June, 1952. There are now about 13,000 homes built and occupied. When the building job is completed next year, there will be more than 17,000 dwellings housing a population of 70,000.

Excise Tax--

(Concluded from Page 1, Col. 3)
to the Secretary of the Treasury, presented the recommendations to a House Ways and Means subcommittee.

The court ruling pertaining to warranties was made by the U. S. Court of Claims in the so-called "Frigidaire case." The court held that a company which sells an item subject to excise tax is entitled to a refund of a portion of the tax on any repair or replacement costs that it has, under a warranty, included in the original sale price.

As of last Sept. 1, it was pointed out, refund claims totaling \$55 million had been filed under the court decision by some 70 taxpayers. Ultimate refund claims would total many times that figure, Congress was told.

In recommending retroactive reversal of the ruling, the staffs said the decision would be hard

to apply and is not in accord with the intent of Congress.

It was also suggested that Section 4220 of Public Law 367 of the last session be amended to make it clear that refrigerator, radio, and TV parts would not be tax free when sold as repair or replacement parts.

Another recommendation was for a uniform system of exemptions and refunds for manufacturers' excise taxes and, where applicable, to retail and other excises.

Under present law, excise taxes need not be paid on items bought for use in further manufacturing, for export, or for sale to state and local governments. But the method of obtaining this exemption varies greatly from case to case and in some cases a buyer has to register with the Treasury and file a special exemption certificate for each tax exempt purchase.

It is the staffs' opinion that

there should be a permanent registration of purchasers for any tax exempt purpose. To avoid payment of the tax, there would merely be a note on the sale invoice of the registration number of the purchaser.

Under the staffs' recommendation, exemption certificates would not have to be filed, and refunds or credits would be allowed whenever an item is bought subject to tax, but later used or sold for a tax exempt purpose by simple proof of the final sale or use.

Changes were also recommended in tax treatment of funds spent by manufacturers in cooperative advertising campaigns with distributors. The staffs said the Internal Revenue Service would soon issue new rulings to carry out these recommendations.

The staffs said that where a manufacturer makes his customers pay a certain amount for advertising purposes into a

separate fund, and the fund remains the property of the customer, the manufacturer need not pay tax on this amount as part of his selling price.

But if the manufacturer makes a payment into a separate advertising account which he controls, he must include such payments in his selling price and pay tax on them. In this case, however, he can later readjust his selling price if he takes money out of the advertising fund and pays it to distributors for advertising expenditures they have.

These regulations, the staffs said, should apply to national as well as local advertising.

Among other recommendations was one for a general revision of the present floor stock refunds of manufacturers so they would not have to pay dealers their claims prior to the time producers filed for them or received the tax credit or refund.

Get in on the home building boom with year 'round air conditioning!



the new Mueller Climatrol combination unit

Don't be a one-season dealer in an all-season business. Get your share of profits on new home construction this spring by selling year-round air conditioning with the new 128-928 Mueller Climatrol.

IT HEATS! IT COOLS! This compact, competitively priced combination packs sales-winning magic. Prospective homeowners respond to Mueller Climatrol quality... to the promise of year-round comfort.

THE SIZE IS RIGHT! Choice of 2 or 3 hp cooling. Heating is 110,000 Btu input with gas or oil. Unit is 60 1/2" high, 47 1/8" wide, 28 1/2" deep. Cooling may be ordered less the high side for air cooled applications. Installation is easy.

Write today for all the facts — selling features and specifications. Mueller Climatrol, 2056 W. Oklahoma Avenue, Milwaukee 15, Wisconsin.

Mueller Climatrol

...sales are turning greener every day

For more information about products advertised on this page use Information Center, page 24.